

SURREBUTTAL TESTIMONY AND EXHIBIT OF
DAWN M. HIPPI
ON BEHALF OF
THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF
DOCKET NO. 2021-130-S

1 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.**

2 A. My name is Dawn M. Hipp. My business address is 1401 Main Street, Suite 900,
3 Columbia, South Carolina, 29201. I am employed by the State of South Carolina as the
4 Chief Operating Officer of the Office of Regulatory Staff (“ORS”).

5 **Q. DID YOU FILE DIRECT TESTIMONY IN THIS PROCEEDING?**

6 A. Yes. I filed Direct Testimony with the Public Service Commission of South
7 Carolina (“Commission”) on August 24, 2021, regarding Synergy Utilities, L.P.’s
8 (“Synergy”) and South Carolina Water Utilities, Inc.’s (“SCWU”) (collectively, the “Joint
9 Applicants”) request for approval of a sale of assets, including sewer facilities, territories,
10 and certificates of public convenience and necessity, from Synergy to SCWU
11 (“Application”).

12 **Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY IN THIS**
13 **PROCEEDING?**

14 A. The purpose of my surrebuttal testimony is to respond to certain portions of rebuttal
15 testimony of SCWU witness Craig Sorensen. Specifically, I respond to:

- The proposal to transfer the Northwood Estates (“Northwood”) customers and assets to the City of Orangeburg (the “City”) Department of Public Utilities (“Orangeburg DPU”) at no cost.
- The quantifiable benefits for customers of the sale.
- The additional costs to customers.
- The deadline to provide service enhancements.

I. TRANSFER OF NORTHWOOD TO ORANGEBURG DPU

Q. PLEASE RESPOND TO SCWU WITNESS SORENSEN’S REBUTTAL TESTIMONY THAT SCWU’S DECISION TO GIVE THE ASSETS AND CUSTOMERS OF NORTHWOOD TO ORANGEBURG DPU DEMONSTRATES THAT SCWU IS NOT FOCUSED ON ACHIEVING THE HIGHEST RETURN FOR SCWU’S RESPECTIVE OWNERS.¹

A. SCWU witness Sorensen provides no financial analysis to support his statement and does not acknowledge the fact that the revenues generated by Northwood customers do not fully recover the Orangeburg DPU wastewater treatment costs in certain months. This is due to Synergy’s current practice to cap the maximum level of Orangeburg DPU Commodity/Capacity Charge billed to Northwood customers during months where the sewer collection system experiences excessive inflow and infiltration (“I&I”). As stated in my direct testimony, ORS calculated the loss experienced by Synergy associated with the Orangeburg DPU Commodity/Capacity Charge during the most recent 18-month time period (January 2019 through July 2021) at an amount over \$59,000. Thus, Synergy or

¹ Rebuttal Testimony of Craig Sorensen, p.2 lines 3-5.

1 SCWU would immediately experience relief from the unrecovered Orangeburg DPU
2 Commodity/Capacity Charges by giving the Northwood system to Orangeburg DPU.

3 In addition, the Joint Applicants provided information in response to ORS
4 discovery that demonstrates the total Net Plant value of the Northwood collection system
5 is \$7,768.² As reflected in my Surrebuttal Exhibit DMH-1, however, the AECOM Study
6 performed for the County of Orangeburg in 2017 and updated in 2019 estimated the cost
7 to repair or replace certain Northwood collection system deficiencies exceeded \$1.9
8 million.³ Likewise, HPG and Company, retained by Synergy, estimated that approximately
9 \$240,000 would be needed to complete the collection line and pump station repairs for the
10 Northwood collection system.⁴ Both Orangeburg DPU and Synergy understand that further
11 repairs would be necessary to the Northwood collection system and those repair estimates
12 far exceed the net plant value and current revenue loss. As referenced in the August 26,
13 2021, letter filed with the Commission on behalf of Orangeburg DPU, the City is exploring
14 the availability of funding for the Northwood collection system and ORS understands the
15 funding may be used by Orangeburg DPU to repair these identified deficiencies.⁵

16 Based on the above, it is clear that the Northwood collection system has the
17 potential to detract from the future financial performance of Synergy or SCWU and,
18 therefore, donating the Northwood system to Orangeburg DPU will result in financial and
19 operational benefits to either Synergy or SCWU.

² Joint Applicants Response to ORS AIR 2-9.

³ See Surrebuttal Exhibit DMH-1 pp. 33-84.

⁴ See Surrebuttal Exhibit DMH-1 p. 85.

⁵ Letter Regarding Acceptance of Transfer filed August 26, 2021, on behalf of the City of Orangeburg.

Q. DOES THE LETTER FILED WITH THE COMMISSION ON AUGUST 26, 2021, ON BEHALF OF THE CITY OF ORANGEBURG ALTER THE NEED FOR ORS' RECOMMENDED MERGER CONDITIONS #16 AND #17?

A. No, not entirely. ORS appreciates the City of Orangeburg's expression of its intention to accept the transfer of the Northwood collection system and customers subject to obtaining all required approvals and the availability of funding. Because of this, it appears the City may not be willing to vote to accept the Northwood collection system absent the Commission's approval of the sale and transfer in this Docket. However, ORS does not recommend the Commission approve the proposed Application and the transfer of the Synergy system to SCWU absent the City's express approval to accept the transfer of the Northwood collection system.

Because of this "chicken or the egg" dilemma, ORS takes the position that, if funding is not made available for Orangeburg DPU to make the necessary repairs to the Northwood system and if the City does not approve the acquisition of the system, the customer protections outlined in ORS recommended Merger Conditions #16 and #17 are necessary conditions for approval of the Application. The Merger Conditions would ensure that, if Orangeburg DPU ultimately does not take over the system, SCWU will be required to take all necessary actions to control the excessive I&I and that customer rates are not adversely impacted by the Joint Applicants' decisions reflected in the APA.

As a reasonable path forward, ORS would support "conditional" approval of the transfer and sale subject to the Merger Conditions outlined in my direct testimony with the underlined alterations to Merger Conditions #16 and #17:

16. In the event the transfer of the Northwood collection system and customers is not approved by the City of Orangeburg within 90 days after the Commission Order in this Docket, SCWU shall complete an independent engineering assessment and feasibility study of the Northwood collection system within 12 months from the date of closing. The independent engineering assessment and feasibility study shall be funded solely by the owners of SCWU. The independent engineering assessment and feasibility study shall be filed with the Commission and ORS within 30 days of completion of the independent engineering assessment and feasibility study.

17. In the event the transfer of the Northwood collection system and customers is not approved by the City of Orangeburg within 90 days after the Commission Order in this Docket, SCWU shall complete the collection system improvements identified by the independent engineering assessment and feasibility study. SCWU shall begin improvement activity within 12 months of completion of the collection system and feasibility study. SCWU shall file with the Commission and ORS an estimated project timeline for completion and provide quarterly progress reports that detail the specific improvements, location of improvements, a breakdown of costs incurred, and any other information deemed necessary. ORS retains the right to, and may, oppose the SCWU's requests for cost recovery related to any collection system improvements in future base rate proceedings.

II. QUANTIFIABLE BENEFITS TO CUSTOMERS

Q. PLEASE RESPOND TO SCWU WITNESS SORENSEN'S DESCRIPTION OF THE BENEFITS THAT CUSTOMERS WILL RECEIVE AS A RESULT OF THE SALE.

A. SCWU witness Sorensen states that SCWU will provide customers with a "deeper roster" or an increased level of technical, billing and customer service staff compared to the small staff levels currently offered by Synergy. SCWU witness Sorensen goes on to assert that SCWU will provide IT experts to protect sensitive customer data and allow customers to make payments online via computer or cell phone. Finally, SCWU witness Sorensen alludes to increased resiliency due to the additional resources available to SouthWest.

However, Synergy already is able to meet the current customer needs and provide essentially the same services and SCWU only proposes to offer the Synergy customers more

1 of the same service they currently receive. Also, the benefits the Joint Applicants claim
2 customers will receive are achievable without the sale and the eventual increase in cost and
3 expenses that will follow as a result of SCWU's ownership and operation of the system.
4 Furthermore, the Joint Applicants have not been able to quantify or verify the financial
5 benefits, efficiencies, or synergies customers will receive as a result of the sale or to provide
6 any guarantees that customers will receive improved service and reliability from the addition
7 of more technical, billing and customer service staff.⁶ In short, the assertions and claims
8 made by the Joint Applicants about quantifiable benefits are speculative and unsupported.

9 It is a fact that the sale will result in a very large Utility Plant Acquisition Adjustment
10 transferred to the non-utility parent company as goodwill.⁷ Unfortunately, the funds paid in
11 the acquisition premium will not be spent to repair or replace utility plant, improve business
12 processes, or achieve cost savings for the customers. Therefore, ORS's recommended
13 Merger Conditions are necessary to mitigate the risk to customers of additional costs and to
14 provide quantifiable and verifiable merger efficiencies.

⁶ ORS asked the Joint Applicants in six (6) different Audit Information Requests to provide copies of cost studies or cost analyses to support the claims of improvements to reliability and resiliency that would result from the acquisition or have been realized by other SouthWest affiliates following other acquisitions by SouthWest. The Joint Applicants either objected to the request, stated "there are no cost studies or cost analyses performed as part of the acquisition," or only provided general and unsubstantiated comments about the acquisition. Joint Applicants Response to ORS AIR 1-14, 1-15, 1-21, 1-37, 1-45 and 2-8. *See* Surrebuttal Exhibit DMH-1 (Joint Applicants' Responses ORS AIRs designated as confidential under S.C. Code § 58-4-55 are not published in Surrebuttal Exhibit DMH-1).

⁷ Rebuttal Testimony of Craig Sorensen p.4 lines 8-10.

III. ADDITIONAL COSTS TO CUSTOMERS

Q. PLEASE RESPOND TO SCWU WITNESS SORENSEN'S REBUTTAL TESTIMONY ABOUT THE COST IMPACT TO CUSTOMERS RELATED TO MR. PARNELL'S EMPLOYMENT WITH SCWU.

A. SCWU witness Craig Sorensen states that Mr. Parnell is paid a salary from Synergy and his salary with SCWU will be less than his current salary.⁸ The APA states Mr. Parnell will execute an employment agreement with SouthWest and the starting salary will be no less than \$[REDACTED]. In Docket No. 2017-28-S, the Commission approved a schedule of rates and charges that included recovery of Mr. Parnell's annualized salary of \$[REDACTED] based on the Test Year ending June 30, 2017. Given the wording contained in the APA, it is reasonable to expect that the salary attributed to Mr. Parnell's continued employment with SCWU will increase resulting in additional costs to the customers following the acquisition. In addition, SCWU states that customers will receive the services of five qualified licensed wastewater operators, and it is likely that SCWU would seek to recover the labor costs attributed to the five additional wastewater operators in its next general rate proceeding.

Q. PLEASE RESPOND TO SCWU WITNESS SORENSEN'S REBUTTAL TESTIMONY IN WHICH SCWU DISAGREES WITH ORS' RECOMMENDED MERGER CONDITION #15 TO MITIGATE THE COST IMPACT OF EXCESSIVE I&I TO THE NORTHWOOD CUSTOMERS.

⁸ Rebuttal Testimony of Craig Sorensen p.4 lines 6-7.

1 A. In response to ORS discovery, the Joint Applicants affirmed that SCWU would
2 continue to cap Orangeburg DPU's wastewater treatment costs at 400 gallons per day per
3 month to protect Northwood customers from unusual spikes in treatment costs.⁹ However,
4 in Rebuttal Testimony SCWU witness Sorensen indicates that SCWU does not intend to
5 continue this practice indefinitely. ORS takes the position that the customer protections
6 outlined in ORS recommended Merger Condition #15 is an essential condition for approval
7 of the Application. Merger Condition #15 would ensure that, while SCWU operates the
8 Northwood collection system and if Orangeburg DPU ultimately does not accept the
9 collection system, SCWU will be required to cap the maximum level of the Orangeburg
10 DPU Commodity/Capacity Charge billed to Northwood customers at 400 gallons per day
11 until such a time as the collection system improvements are completed and the Commission
12 approves the cessation of the Commodity/Capacity charge billing cap.

13 Absent Merger Condition #15, Northwood customers could be adversely impacted
14 when SCWU determines that it no longer will provide the current customer protection.
15 ORS recommends SCWU not be allowed to recover any wholesale Orangeburg DPU
16 treatment expense above the maximum level of 400 gallons per day because, if SCWU
17 were allowed to recover the treatment cost from its customers, it would shift the cost burden
18 of poor collection system operations and maintenance practices away from SCWU and
19 onto the customers. In addition, the allowance of wastewater treatment costs above the 400
20 gallon per day per customer cap would serve as a disincentive to SCWU to timely correct
21 and control the excessive I&I.

⁹ Joint Applicants Response to ORS AIR 1-51.c.

1 **Q. PLEASE RESPOND TO SCWU WITNESS SORENSEN'S REBUTTAL**
2 **TESTIMONY IN WHICH SCWU DISAGREES WITH ORS' PROPOSED**
3 **MERGER CONDITION #17 WHICH RECOMMENDS THAT COLLECTION**
4 **SYSTEM IMPROVEMENTS FOR THE NORTHWOOD SYSTEM BE FUNDED**
5 **BY THE OWNERS OF SCWU AND EXCLUDED FROM THE CALCULATION**
6 **OF THE COST OF CAPITAL AND RATE BASE.**

7 A. SCWU will transfer the large Utility Plant Acquisition Adjustment to the non-
8 utility parent company, SouthWest, as goodwill.¹⁰ In response to ORS discovery, SCWU
9 stated it will fund the Synergy asset acquisition using a combination of existing debt and
10 equity, specifically short-term intercompany advances from SouthWest in the form of cash
11 on hand.¹¹ As a result, the existing debt and equity from SouthWest diverted to
12 overcompensate Synergy in excess of double the net plant value will not be invested by
13 SCWU to make necessary repairs and replacements to reduce the excessive I&I in
14 Northwood. It is reasonable to anticipate that SCWU may obtain higher cost debt and/or
15 additional equity to make the necessary improvements to the Northwood collection system.
16 The additional capital and infrastructure improvements may be incorporated into rate base
17 on which SCWU's owners will have an opportunity to earn a reasonable return. As a result
18 of SCWU's decision to deploy capital to overcompensate Synergy for the sale, customers
19 will be penalized through higher rates while the owners experience a higher return. This is
20 unfair and unreasonable.

¹⁰ Rebuttal Testimony of Craig Sorensen p.4 lines 8-10.

¹¹ Joint Applicants Response to ORS AIR 1-20, 2-6 and 2-7.

1 That said, ORS has revised its recommended Merger Condition #17 as shown on page 5 of
2 my surrebuttal testimony to provide that ORS reserves its rights to review and make
3 recommendations in the next general rate proceeding related to any infrastructure
4 improvements undertaken by SCWU. This will allow ORS and the Commission the ability
5 to address any infrastructure improvements in a future rate case.

6 **Q. DO YOU AGREE WITH SCWU WITNESS SORENSEN'S**
7 **CHARACTERIZATION OF THE NORTHWOOD COLLECTION SYSTEM AS**
8 **"CHALLENGED?"**¹²

9 A. No. SCWU Witness Sorensen implies that the collection system serving the
10 Northwood customers is not providing reliable and high-quality sewer service. This is not
11 an accurate characterization and it is not reflected in the information provided in the
12 Application or by the Joint Applicants. As stated in my Direct Testimony, Synergy does
13 not have environmental or regulatory compliance violations. The Commission has not
14 determined that Synergy has inadequate financial, managerial, or technical ability to
15 provide on-going quality sewer service. Aside from the high-bill complaints from
16 Northwood customers, which are related to the pass-through Orangeburg DPU Service
17 Charge, ORS has received few service complaints from Synergy customers.

¹² Rebuttal Testimony of Craig Sorensen p.6 line 10.

IV. DEADLINE TO PROVIDE SERVICE ENHANCEMENTS

Q. PLEASE RESPOND TO SCWU WITNESS SORENSEN'S REBUTTAL TESTIMONY RELATED TO ORS' RECOMMENDED MERGER CONDITION #6.

A. SCWU Witness Sorensen indicates that SCWU will need up to 120 days after closing of the sale to implement online credit card bill pay and to provide customers with access to a 24-hour customer service team. ORS accepts the commitment by SCWU to provide these limited service enhancements. Pursuant to 10 S.C. Reg. 103-530.E, SCWU is required to provide customers access with adequate means to contact the utility at all hours in case of emergency.

Q. WILL YOU UPDATE YOUR SURREBUTTAL TESTIMONY BASED ON INFORMATION THAT BECOMES AVAILABLE?

A. Yes. ORS fully reserves the right to revise its recommendations via supplemental testimony should new information become available not previously provided by the Joint Applicants, or other sources, become available.

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes, it does.

IN RE: Joint Application for Approval of	)	SOUTH CAROLINA OFFICE OF
the Sale of Assets and Transfer of	)	REGULATORY STAFF'S FIRST AND
Facilities, Territory, and Certificate of	)	CONTINUING REQUEST FOR
Public Convenience and Necessity from	)	BOOKS, RECORDS, AND OTHER
Synergy Utilities, L.P to South Carolina	)	INFORMATION
Water Utilities, Inc.)	

TO: CHARLES L.A. TERRENI, ESQUIRE AND SCOTT ELLIOTT, ESQUIRE,
COUNSEL FOR SYNERGY UTILITIES, L.P. AND SOUTH CAROLINA WATER
UTILITIES, INC.

The South Carolina Office of Regulatory Staff (“ORS”) hereby requests pursuant to S.C. Code Ann. §§ 58-4-55 and 58-5-230 that Synergy Utilities, L.P (“Synergy”) and South Carolina Water Utilities, Inc. (“SCWU”) (“collectively the Joint Applicants”) provide responses in writing, electronically where required, and serve the undersigned by **May 26, 2021**, to ORS at 1401 Main Street, Suite 900, Columbia, South Carolina, 29201. If you are unable to respond to any of the requests, or part or parts thereof, please specify the reason for your inability to respond and state what other knowledge or information you have concerning the unanswered portion.

As used in these requests, “identify” means, when asked to identify a person, to provide the full name, business title, address and telephone number. As used in these requests, “address” means mailing address and business address.

When asked to identify or provide a document, “identify” and “provide” mean to provide a full and detailed description of the document and the name and address of the person who has custody of the document. In lieu of providing a full and detailed description of a document, a copy of the document may be attached with the identity of the person who has custody of it. When the word “document” is used herein, it means any written, printed, typed, graphic, photographic, or electronic matter of any kind or nature and includes, but is not limited to, statements, contracts, agreements, reports, opinions, graphs, books, records, letters, correspondence, notes, notebooks, minutes, diaries, memoranda, transcripts, photographs, pictures, photomicrographs, prints, negatives, motion pictures, sketches, drawings, publications, and tape recordings.

Wherever in this request a masculine pronoun or possessive adjective appears, it refers to both males and females in accordance with traditional English usage.

IT IS THEREFORE REQUIRED:

- Pursuant to S.C. Code Ann. § 58-4-55(A), that responses be submitted under oath.
- In addition to the signature and verification at the close of the responses, the witness(es), employee(s), contractor(s), or agent(s) responsible for the information contained in each response shall be indicated at the bottom of each response.
- All information provided shall be provided in electronic form only unless otherwise requested. All information available in Excel spreadsheets shall be provided in Excel. All Excel spreadsheets shall be working copies with all formulas, links, and calculations intact.
- All electronic documents provided must be provided in native file format with all formulas, links, and calculations intact. Responses containing .pdf documents must be searchable. Each electronic file must be clearly marked with the Response number.
- Any inquiries or communications relating to questions concerning clarification of the information requested below should be directed to Kyle D. Maurer Sr., PhD, P.E. [803.737.0959], Daniel P. Hunnell [803.737.0780], Benjamin P. Mustian, Esquire [803.737.0898] or Alexander W. Knowles, Esquire [803.737.0889] of ORS.
- That the responses be sent electronically to Kyle D. Maurer Sr., PhD, P.E. at kmaurer@ors.sc.gov, Daniel P. Hunnell at dhunnell@ors.sc.gov, Benjamin P. Mustian,

Esquire at bmustian@ors.sc.gov, and Alexander W. Knowles, Esquire at aknowles@ors.sc.gov.

- That this entire list of requests be reproduced and included in front of each set of responses.
- If the response to any request is that the information requested is not currently available, please advise ORS and state when the information requested will be available and provided to the ORS. This statement is not a waiver of the deadline for all other responses.
- This request is continuing and requires the Company to supplement or amend its responses as any additional information becomes available.
- For every page produced to ORS that contains confidential information, the page is to be marked “CONFIDENTIAL” in the header. Any specific information which the Company designates as confidential information must also be marked by notation, highlighting, or other conspicuous means.
- The following definitions shall apply:
 - a. Goodwill. Goodwill is an asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognized. The terms “goodwill” and “acquisition premium” are used interchangeably for ratemaking purposes and for the purposes of this request.
 - b. Transaction costs. Transaction costs include any costs incurred in connection with completion of the acquisition of Synergy and/or its assets, facilities, territory, and Certificate of Public Convenience and Necessity by SCWU including the costs of obtaining all necessary regulatory approvals for the sale and any payments identified in the Agreement. Examples of such costs include, but are not limited to, legal fees and expenses, regulatory filing fees, costs of developing and pursuing regulatory approvals, accounting fees, interest, prepayment penalties, financial advisory fees, and banking fees.
 - c. Transition costs. Transition costs are generally costs arising from the activities necessary to integrate the purchased entity into the acquiring entity. Examples of transition costs include but are not limited to, those costs related to the integration of financial, IT, human resource, billing, accounting, and telecommunications systems and processes. Other examples of costs may include, but are not limited to, severance payments to employees, costs related to changes to signage, the cost of transitioning employees to post-merger employee benefit plans, legal fees, and expenses related to the resolution of the NPDES permit for Raintree Acres (SC0039055) and wholesale wastewater treatment agreement with City of Orangeburg Department of Public Utilities (“Orangeburg DPU”), and termination of any duplicative leases, contracts, operations.

II. REQUESTS

Questions about SCWU and SouthWest Water Company ("SWWC")

- 1-1 Please provide an organizational chart that lists all SWWC subsidiary and affiliate entities that are or will be operating in South Carolina. The list should include all inactive and active entities.

Please see Attachment 1-1 Org Chart.

-Brian Bahr

- 1-2 Describe and identify all members of the board of directors of SWWC. The description should include, but not be limited to, leadership, structure, and committees.

Please see SouthWest's website here: <https://swwc.com/board-of-directors/>.

-Brian Bahr

- 1-3 Within SWWC corporate structure, identify the person(s) who is (are) charged with making operational decisions such as supply chain management, inventory management, environmental compliance, and utility operations for SWWC's South Carolina subsidiaries. Describe the process for making operational decisions and describe any corporate policies or written procedures surrounding such decisions.

Craig Sorensen, P.E. is the president of SWWC's South Carolina subsidiaries and responsible for the management and operations thereof. Mr. Sorensen operates the South Carolina subsidiaries in consultation with SWWC's leadership team, the composition of which is listed at <https://www.swwc.com/leaders/>. Internal policies and operational decisions are made with the goal of achieving or exceeding regulatory standards related to water quality, environmental, safety, emergency preparedness, employment practices, etc., while also striving to ensure operational decisions are prudent and cost-effective. SWWC strives to follow best practices from such regulatory bodies as EPA, DHEC, PSC, OSHA, and other regulatory bodies. Ultimately, operational decisions are made with the goal of providing high-quality, reliable, safe, efficient services to South Carolina customers and our communities.

-Craig Sorensen

- 1-4 Within the SWWC corporate structure, identify any person(s) who is (are) charged with making managerial decisions such as targeted growth rates and employee headcount for SWWC's South Carolina subsidiaries. Describe the process for making managerial decisions and describe any corporate policies or written procedures surrounding such decisions.

Craig Sorensen, P.E. is the president of SWWC's South Carolina subsidiaries and responsible for the management and operations thereof, including such decisions as relate to forecasted customer growth and internal resources needed to continue providing high-quality, reliable, efficient water and wastewater services to our South Carolina customers. Management decisions are made to achieve goals that are set to further SCWU's mission in South Carolina of providing high-quality, reliable, safe, efficient service to customers and our communities.

-Craig Sorensen

- 1-5 Within the SWWC corporate structure, identify the person(s) who is (are) charged with making financial decisions such as the investment of equity, financing, working capital, budget creation and dividend payments for SWWC's South Carolina subsidiaries. Describe the process for making financial decisions and describe any corporate policies or written procedures surrounding such decisions.

Craig Sorensen, P.E. is the president of SWWC's South Carolina subsidiaries and responsible for the management and operations thereof. Mr. Sorensen operates the South Carolina subsidiaries in consultation with his leadership team. As noted in SWWC's Cost Allocation Manual, the corporate finance function provides services relating to the budgeting and forecasting process, treasury, capital structure, and gives management the financial information necessary for informed operating and financial decision making.

-Craig Sorensen

- 1-6 Describe how SWWC's affiliates allocate shared costs and shared expenses (e.g., management, operations, offices, etc.) between and among any two or more subsidiaries. Please provide the most current cost allocation manual, policies, or procedures used by SWWC and SCWU.

SWWC's cost allocation manual is provided as Attachment 1-6 CAM.

-Mujeeb Hafeez

- 1-7 Describe how SCWU service territories will allocate shared costs and shared expenses (e.g., management, operations, offices, etc.) between and among any two or more service territories (i.e., service territories formerly known as Harbor Island, Synergy, and TJ Barnwell). Please provide the most current cost allocation manual used by SCWU.

Please refer to the regional allocations section of the cost allocation manual provided in response to Request No. 6.

-Mujeeb Hafeez

- 1-8 Provide the actual corporate overhead allocation (in dollars per year) from SWWC to SCWU in 2020 and explain how and the accounting entry where the corporate overhead

allocation is recorded on SCWU's accounting books and records. Please state the time period during which the corporate overhead allocation was based (i.e., a calendar year, a fiscal year, or some portion thereof).

The actual corporate overhead allocation from SWWC to SCWU in 2020 was \$0. As described in the cost allocation manual provided in response to Request No. 1-6, corporate overhead is not allocated to a subsidiary until the calendar year following its acquisition. SCWU had no assets or operations until its acquisition of Harbor Island and TJ Barnwell in 2020 (PSC Orders No. 2020-36 and No. 2020-35).

-Mujeeb Hafeez

- 1-10 Identify and describe the corporate services that are or will be performed by SWWC and allocated to SCWU and its customers.

Please refer to the “Scope of Services Provided by SWWC” section of the Cost Allocation Manual provided in response to Request No. 1-6.

-Mujeeb Hafeez

- 1-11 Describe all existing contractual relationships between SWWC and its subsidiaries or between subsidiaries of SWWC. Provide copies of all such contractual agreements.

SCWU objects to this request on the grounds that it is arbitrary, capricious, unnecessary, unduly burdensome, or unrelated to the regulated operations of a public utility. The request extends to SWWC’s relationships with numerous regulated and unregulated subsidiaries in multiple states other than South Carolina. Subject to this objection, SCWU responds as follows.

There are no existing contractual relationships between SCWU, and SWWC or any of its subsidiaries.

-Joshua Abbotoy

- 1-12 Confirm SWWC will not seek to use its SCWU subsidiary as a guarantor of any debt for SWWC or any other SWWC affiliate and that any debt incurred by the SCWU subsidiary will only be utilized for purposes specific to the SCWU system and operations. If not confirmed, please explain.

Synergy will not make any short-term loans or advances to or from SWWC or any other SWWC affiliates, except on terms that are substantially similar to those that would be available on an arms-length basis with unrelated third parties.

-Brian Bahr

- 1-13 Identify all mergers or asset acquisitions in the last ten (10) years completed by SWWC. For each merger or asset acquisition provide in .pdf format copies of any filed stipulations or settlement agreements, and all commission orders approving said mergers or asset acquisitions.

SCWU objects to this request on the grounds that it is arbitrary, capricious, unnecessary, unduly burdensome, or unrelated to the regulated operations of a public utility. The request extends to SWWC’s relationships with numerous regulated and unregulated subsidiaries in multiple states other than South Carolina. Subject to this objection, SCWU responds as follows.

In the last ten years, SWWC and/or its subsidiaries have completed the following asset acquisitions, equity acquisitions, and mergers in the State of South Carolina. Settlement documents and Commission orders may be found on the Commission's docket management page for those respective dockets. Please see also response to Request No. 1.

ACQUIREE	ACQUIROR	TYPE	DOCKET	ORDER
Kiawah Island Utility, Inc.	South Carolina Utility Systems, Inc.	Equity	N/A	N/A
CUC, Inc.	South Carolina Water Utilities–CUC, Inc.	Asset	2020-225-WS	2021-93
T.J. Barnwell Utility, Inc.	South Carolina Water Utilities, Inc.	Asset	2019-318-S	2020-35
Harbor Island Utilities, Inc.	South Carolina Water Utilities, Inc.	Asset	2019-319-WS	2020-36
Ni South Carolina Utilities, Inc.*	South Carolina Utility Systems, Inc.	Equity	N/A	N/A
Ni America Operating LLC	South Carolina Utility Systems, Inc.	Equity	N/A	N/A
Ni South Carolina LLC.**	South Carolina Utility Systems, Inc.	Equity	N/A	N/A

*Includes the subsidiaries 1710 Woodcreek Farms, LLC and Palmetto Utilities, Inc.

**Includes the subsidiaries Ni SC Environmental Services LLC and Palmetto Wastewater Reclamation LLC.

-Brian Bahr

- 1-14 For each merger or asset acquisition listed in response to 1-13, please identify and explain any objective or quantifiable benefits realized by customers as a result of the acquisition. Please explain each answer and provide supporting information to quantify the service improvement, reduced utility costs, and/or savings to customers. In answering the question take into consideration if the acquired utility possessed the financial and/or managerial ability to improve their performance without the acquisition taking place.

SCWU objects to this request on the grounds that it is arbitrary, capricious, unnecessary, unduly burdensome, or unrelated to the regulated operations of a public utility. The request extends to SWWC's relationships with numerous regulated and unregulated subsidiaries in multiple states other than South Carolina. Subject to this objection, SCWU responds as follows.

The asset acquisitions listed in response to ORS Request No. 1-13 were found by the Commission to be in the public interest; the records in each of those cases support the Commission's findings regarding benefits to customers, including service enhancements, improved quality of service, and economies of scale. The equity acquisitions listed above were not subject to Commission jurisdiction, but generally provided customers analogous benefits to those of the asset acquisitions.

-Brian Bahr

Questions about the Joint Application

1-15 Paragraphs 10 and 16 of the Joint Application state that “[c]ustomers will not be materially affected by the transaction ...” and that “it is in the public interest that the Agreement be approved.” For each merger or asset acquisition that SWWC or its subsidiaries completed in the past ten (10) years, advise if SWWC or its subsidiaries made similar claims in filings with any state commission for approval of the acquisition. For each such merger or asset acquisition:

- a. Provide a detailed cost study or other analysis that the customers of those acquired utilities were not materially affected.

SCWU objects to this request on the grounds that it is arbitrary, capricious, unnecessary, unduly burdensome, or unrelated to the regulated operations of a public utility. The request extends to SWWC’s relationships with numerous regulated and unregulated subsidiaries in multiple states other than South Carolina. Subject to this objection, SCWU responds as follows.

All cost studies or analyses used by the Commission to support its determinations that the asset acquisitions listed in response to ORS Request No. 1-13 were in the public interest and that customers would not be materially affected by the transaction would have been included in the respective evidentiary records of those cases; please refer to the case records of those dockets. The equity transactions listed above were not subject to Commission jurisdiction; nevertheless, competitive benefits similar to asset sales are expected to be achieved.

- b. If no cost study or other analysis exists, provide a detailed explanation as to how SCWU supports the statement customers will not be materially affected by the transaction in this filing.

All cost studies or analyses used by the Commission to support its determinations that the asset acquisitions listed in response to ORS Request No. 1-13 were in the public interest and that customers would not be materially affected by the transaction would have been included in the respective evidentiary records of those cases; please refer to the case records of those dockets. Regarding the equity transactions listed in response to ORS Request No. 1-13, no cost studies or analyses were provided since Commission approval was not required; nevertheless, competitive benefits similar to asset sales are expected to be achieved.

-Brian Bahr

- 1-16 Please define the term “public interest” as used in Paragraphs 10 and 16 of the Application. Explain why the provision of wastewater service by Synergy is not currently in the public interest.

“The Commission is the regulatory body with primary responsibility for considering and deciding the public interest and determining just and reasonable rates that are consistent with the public interest and the constitutional standards of Bluefield, Hope, and Southern Bell.” Order No. 2018-804, December 21, 2018, p. 17. The Commission has determined the public interest on a case-by-case basis, and the Joint Applicants refer to its decisions as reference.

In this instance, neither Synergy nor SCWU customers’ rates will not be changed as part of the instant application, and customers’ service will not be interrupted. The transition of the utility ownership will be carefully managed to minimize any inconvenience to customers. The Joint Applicants are not required to show the current ownership is not in the public interest, and therefore object to this part of the request as irrelevant, arbitrary, capricious, unnecessary, and unrelated to the operations of either utility.

-Brian Bahr

- 1-17 Provide the number of and type of customer complaints received by Synergy in 2018, 2019, 2020, and 2021.

Please refer to attachments “ORS 1-17 Customer Complaints.”

-Keith Parnell

- 1-18 Identify the number of customer inquiries or complaints received by Synergy due to the lack of customer service enhancements such as access to a 24-hour customer service team and online credit card bill-pay.

Synergy’s after-hours customer service calls are routed through an answering service, and while Synergy is not aware of any instance where customer service was untimely, Synergy does not have the resources to have a 24-hour customer service team. Synergy has considered online credit card bill-pay but found the costs prohibitive.

-Keith Parnell

- 1-19 Please provide the basis for and any reason(s) to support the statement in the Joint Application “Synergy no longer wishes to own the utility.”

The owners of the principals have determined to sell their interests in the utility.

-Keith Parnell

- 1-20 Please explain how SWWC, its subsidiaries, or affiliates will fund the asset acquisition. If new long-term debt will be utilized, provide the detail and status of acquiring new note(s). If equity will be utilized, provide the detail of the source of such equity.

On the closing date, the specified acquiror, SCWU, will fund the asset acquisition from a combination of existing debt and equity.

-Dan Medina

- 1-21 What cost savings and management improvements has SCWU studied, considered, or identified in connection with this acquisition? Provide all cost studies or cost analyses related to this acquisition. Provide the names of the individuals who completed such studies or analyses and identify all instructions and guidance provided to the individual(s) who completed the studies or analyses. If no cost study or analysis exists, provide a detailed explanation of why cost savings were not an aspect in determining the terms of this acquisition and the purchase price.

SCWU believes that there can be improvements in reliability and resiliency with the acquisition. Synergy customers will be served by a larger utility with scale and a significant presence in the Columbia area, resulting in more available resources to serve the utility's customers. Additionally, SCWU will offer enhanced customer service options that will improve the customer experience. There are no cost studies or cost analyses performed as a part of the acquisition. In a regulated environment, efficiencies are returned to the customers through rates over time.

-Michael Cartin

Questions about the Asset Purchase Agreement

- 1-23 Describe all criteria and provide all calculations the Joint Applicants relied upon to determine that the System Purchase Price and the Goodwill Purchase Price accurately reflects the value of the wastewater collection and treatment systems in Fairfield, Lexington, Orangeburg, and Richland counties. Please provide a separate response for each party.

The System Purchase Price and the Goodwill Purchase Price were arrived at following good-faith, arm's-length negotiations between SCWU and Synergy.

-Joshua Abbotoy

The owners of the principals have determined that the System Purchase Price and Goodwill Purchase Price were adequate for their purposes.

-Keith Parnell

- 1-24 In regard to the long-term debt identified on Schedule 205 of Synergy's 2020 Wastewater Annual Report, please identify and explain if SCWU will assume the \$844,707 of debt or if Synergy will extinguish the debt before or at the time of the asset acquisition. If the long-term debt is addressed in the APA, please identify the section of the APA that addresses long-term debt.

SCWU will not assume any debt from Synergy as part of the asset acquisition. It is expected that Synergy will extinguish such debt by no later than the closing date of the asset acquisition. Under Section 3(a) of the APA, SCWU and Synergy agreed that SCWU would only assume those liabilities expressly set forth on Schedule 3(a), and that Synergy would retain all other liabilities. No debt of any nature was listed on Schedule 3(a).

-Joshua Abbotoy

- 1-25 Identify any and all debts (both short- and long-term) to be absorbed by either SCWU or SWWC as part of this transaction. For each issuance, identify the issue date, maturity date, original principal amount, amount outstanding, and interest rate.

None.

-Joshua Abbotoy

- 1-26 Describe the tax benefits that will accrue, for either SWWC, SCWU, or Synergy as a result of this transaction. Please identify which entity will benefit from each tax benefit.

At this time, there are no known tax benefits. There were no deferred income taxes included in Synergy's last rate order. As a result of the transaction, SCWU will record fixed assets in accordance with Treasury Regulation Section 1.1012-1(a) and depreciate these assets based on the useful life of such assets in accordance with Internal Revenue

Code Section 167. Any method life differences in depreciable assets recorded would result in the creation of deferred tax income balances.

-Victoria Shupak

- 1-27 How will any tax benefits identified in 1-26 be shared with current Synergy ratepayers? Explain in detail.

At this time, there are no known tax benefits.

-Victoria Shupak

- 1-28 In order of importance, provide a detailed list of the top five (5) reasons SCWU wants to acquire the assets and service territory of Synergy.

SCWU entered into an asset purchase agreement with Synergy consistent with its mission of providing quality wastewater service to South Carolina residents.

-Brian Bahr

- 1-29 In order of importance, provide a detailed list of the top five (5) reasons Synergy wants to sell the assets and transfer the service territory to SCWU.

The owners of the principals have determined to sell their interests in the utility.

-Keith Parnell

- 1-30 What feature(s) of SCWU's APA influenced Synergy to accept the APA?

The APA was negotiated, and was found acceptable, by both parties as part of an arm's-length transaction.

-Keith Parnell

- 1-31 Prior to signing the APA, please identify if Synergy negotiated the sale or transfer of assets with any other entities. If the answer is in the affirmative, please provide a list of all other parties with whom Synergy engaged in discussions.

None.

-Keith Parnell

- 1-32 In determining the Purchase Price, what monetary value did SCWU place on Synergy's right to its service territory protection from other investor-owned utilities?

No value was assigned exclusively to Synergy's rights to its service territory.

-Chris Heinrich

- 1-33 Provide the level of estimated annual earnings for each of the next five (5) years that SCWU estimated in calculating the Purchase Price. If the level of annual earnings was not considered to determine the Purchase Price, provide a detailed explanation as to why the Purchase Price did not consider the level of annual earnings.

Please see table below:

Year 1	Year 2	Year 3	Year 4	Year 5
\$97,064	\$98,194	\$133,819	\$113,007	\$132,204

The purchase price was arrived at following good-faith, arm's-length negotiations between SCWU and Synergy.

-Chris Heinrich

- 1-34 Provide a detailed analysis of future rate base additions and the associated cost or expense SCWU assumed in calculating the Purchase Price. If rate base additions were not considered to determine the Purchase Price, provide a detailed explanation as to why the Purchase Price did not consider future rate base additions.

The purchase price is reflective of SCWU's purchase of Synergy's assets as of the date of acquisition.

-Chris Heinrich

- 1-36 Provide an estimate of the transaction costs resulting from this acquisition. Provide detail as to how SWWC or SCWU will record transaction costs to its accounting books and records.

SCWU will not seek to request recovery of any transaction costs related to the proposed acquisition and transfer of Synergy assets and customers, respectively.

-Brian Bahr

- 1-37 Describe all transition costs resulting from this acquisition and provide the full level of detail presently available itemizing the amount of transition costs. In addition:

- a. Provide a detailed breakdown to itemize all estimated transition costs budgeted by SCWU.

SCWU does not have a breakdown of estimated transition costs and is not requesting any approval of transition costs as part of this proceeding.

- b. Provide the specific customer benefit associated with each category of transition costs.

Please refer to SCWU's response to ORS Request No. 1-56.

- c. If Synergy is not currently providing those benefits to its customers, please explain why not.

The software costs and human resources expenses associated with benefits listed in response to ORS Request No. 1-56 would not be a prudent investment for a company the size of Synergy.

- d. Absent the APA, would Synergy be able to provide these customer benefits at lower cost? If the answer is no, provide a detailed cost analysis or cost study that supports the answer.

The ORS is fully aware of Synergy's cost of service. At this time, Synergy's level of service is consistent with its authorized revenue. Were Synergy to attempt to provide additional customer benefits, its costs would increase, which would drive Synergy to the Commission for rate relief sooner than necessary.

- e. If the Public Service Commission of South Carolina ("Commission") today ordered Synergy to provide those benefits to its customers, would Synergy be able to provide those benefits within one (1) year? If not, provide a detailed explanation why not.

The benefits provided by SCWU are not easily replicable given the size and scope of resources available to SCWU through SWWC. Synergy cannot forecast whether it could secure the talent and necessary labor to provide. Additionally, the companies are not aware of the expense and debt service required to upgrade Synergy's IT and software programs.

-Keith Parnell & Michael Cartin

- 1-38 Explain how SWWC or SCWU will record the transition costs to its accounting books and records. Explain if and how SCWU will include transition costs in future general rate case proceedings.

SCWU will record transition expenses, if any, in a separate account. Any capitalized transition costs will be recorded as separate assets. SCWU will review these costs at a later date to determine potentially requesting recovery as part of a future general rate case.

-Kent Cauley

- 1-39 Provide a detailed list of all new or replacement capital expenditures that SWWC or SCWU anticipates making in the next five (5) years for the wastewater systems subject to the APA and which are estimated to individually exceed \$20,000. The list should include a description of the capital expenditure, the subdivision location, the budgeted amount of the project, and the year in which the expenditure would occur.

SCWU intends to make capital improvements at the Raintree facility with the installation of a new UV system within the first year of operation. This is projected to cost approximately \$50,000.

-Michael Cartin

- 1-40 Please list all active DHEC operating permits for the Synergy wastewater systems to be acquired. This list should include all Discharge (prefix "SC"), No Discharge (prefix "ND"), and Satellite Sewer (prefix "SSS") permits which cover all residential subdivisions listed in Exhibit A of the Joint Application.

Bush River WWTP – NPDES Permit No. SC0032743
Windy Hill Subdivision WWTP – Discharge Permit No. ND0067075
Rain Tree WWTP – NPDES Permit No. SC0039055
Vanarsdale Satellite Sewer System No. - SSS000758
Northwoods Satellite Sewer System No. - SSS000787
Royal Hills Satellite Sewer System No. - SSS000631

-Michael Cartin

- 1-41 Provide the correspondence that demonstrates if DHEC has been specifically notified of the proposed transfer of all permits listed in response to 1-40 and provide the date of contact with DHEC.

Please refer to attachment “ORS 1-41 DHEC Correspondence.”

-Michael Cartin

- 1-42 S.C. Ann. Code Reg. 103-504 requires notice to other interested wastewater utilities. Explain why notice was not provided to Orangeburg DPU, the Town of Lexington, or the Town of Winnsboro.

Notice has been provided these entities as required by the regulation.

-Brian Bahr

Questions about Northwood Estates Subdivision

- 1-43 Please provide the current status of the wholesale wastewater treatment contract between Synergy and Orangeburg DPU.

Pursuant to a wholesale wastewater agreement dated April 17, 2018, the Orangeburg Department of Public Utilities (“Orangeburg DPU”) treats the sewage collected from the Northwoods Subdivision. DPU charges a treatment charge of \$2.54 per 100 cubic feet and a monthly service charge of \$25.78 for its treatment services which Synergy passes through to its Northwoods customers without mark-up as authorized by the Commission. As a protection to its customers for unusual spikes in treatment costs, Synergy caps DPU’s treatment costs at 400 gallons per day per month. By its terms, the wholesale Wastewater Agreement expired in three years. By telephone conference March 9, 2021, Warren T. Harley, DPU Manager, assured Synergy and South Carolina Department of health and Environmental Control representatives that DPU would continue to honor the agreement until a successor agreement was negotiated and approved by the Public Service Commission. DPU has hired Jack Pringle, Esquire to draft and negotiate the contract. The DHEC representative is Buck Graham.

-Keith Parnell

- 1-44 If Synergy or SCWU does not have an active wholesale wastewater treatment contract with a wastewater treatment provider to service the Northwood Estates subdivision (“Northwood”), explain how wastewater treatment services will be performed after the closing of the sale and transfer. Please identify the estimated costs associated with negotiation of a wholesale wastewater treatment contract to serve Northwood.

It is anticipated that if Synergy is unsuccessful in disposing of the Northwood subdivision system prior to the closing of the asset acquisition, then Synergy would renew its wholesale wastewater contract with Northwood, at its cost, and SCWU would assume such contract at the closing of the asset acquisition.

-Joshua Abbotoy

1-45 Is SCWU aware of the AECOM Study¹ dated April 2017 and subsequently updated on August 19, 2019 (*see* Attachment A), which details deficiencies in the Northwood wastewater collection system and the probable costs associated to rectify those deficiencies, and the HPG Study² dated June 4, 2020 (*see* Attachment B)? If the answer is in the affirmative:

- a. Provide any cost studies or any other type of analyses SCWU or Synergy has in its possession related to the deficiencies identified in the AECOM Study.

Neither SCWU nor Synergy has such study or other type of analysis in its possession.

- b. Explain why Paragraph 10, Item (e) of the Asset Purchase Agreement does not require any repairs to the collection system that serves Northwood.

While Section 10(e) of the Asset Purchase Agreement contains a handful of discrete asset repairs that SCWU and Synergy had negotiated to be handled by Synergy at its cost prior to the closing of the asset acquisition, as part of arm's-length, good-faith negotiations, Section 10(e) was not intended to, and does not, include a comprehensive list of all repairs that may be prudent to make to Synergy's collection systems.

-Joshua Abbotoy & Keith Parnell

1-46 Describe the collection system improvements made to the Northwood system in the last twelve (12) months.

Please refer to attachment "ORS 1-46 "Northwood System."

-Keith Parnell

1-47 In regard to Northwood, provide a schedule similar to Schedule 201 and Schedule 202 of Synergy's 2020 Wastewater Annual Report that shows the utility plant and associated accumulated depreciation for only Northwood as of December 31, 2020.

Please refer to attachment "ORS 1-47 Northwood Schedule 201."

-Keith Parnell

1-48 Have the Joint Applicants discussed the sale and transfer of Synergy assets with any customer who resides in Northwood prior to the filing of the Joint Application? If so, please provide the customer name and date of contact.

SCWU and Synergy have not had such a discussion.

¹ Titled *Sanitary Sewer System Evaluation for Northwood Estates Collection System for County of Orangeburg*.

² Titled *Synergy Utilities, LP Preliminary Cost Estimate, Sanitary Sewer System Improvement for Northwoods Estate Subdivision*.

-Keith Parnell & Joshua Abbotoy

- 1-49 Have the Joint Applicants discussed the sale and transfer of Synergy assets with Orangeburg DPU prior to filing the Joint Application. If so, please provide the contact name and date of contact.

SCWU and Synergy have not had such a discussion.

-Keith Parnell & Joshua Abbotoy

- 1-50 Please explain how SWWC or SCWU plan to resolve the continued concerns of Northwood customers related to monthly wastewater service rates and inflow and infiltration.

If Synergy has not otherwise disposed of the Northwood subdivision system prior to the closing date of the asset acquisition, SCWU intends to review current circumstances, evaluate alternatives, and determine the prudent course of action to meet the needs of the utility and its customers.

-Joshua Abbotoy

- 1-51 The letter from Scott Elliott on behalf of Synergy to W. Marshall Taylor, Jr., Acting Director of DHEC, dated September 22, 2020 (*see* Attachment C), includes the statement “[a]s a protection to its customers for unusual spikes in treatment costs, Synergy caps DPU’s treatment costs at 400 gallons per day per month.” In regard to this protection afforded to the customers in Northwood:

- a. Identify any other service territory that receives a similar protection for unusual spikes in treatment costs.

None.

- b. Provide a copy of any Commission order or contractual agreement which dictates the protection provided to the customers in Northwood and any other protection identified in part a. above.

None.

- c. Will SCWU continue to provide this protection to the customers in Northwood and any other protection identified in part a. above?

Yes.

-Keith Parnell & Michael Cartin

Questions about Other Technical, Managerial, and Financial Topics

- 1-52 The Raintree Acres wastewater treatment plant (“WWTP”) is classified as a temporary treatment facility and is subject to future interconnection with a regional provider and is currently operating on an expired NPDES permit. Will SCWU continue to operate the WWTP or interconnect with a regional provider? Please explain.

SCWU will continue to operate the WWTP.

-Michael Cartin

- 1-53 Will the existing Synergy utility office located at 816 E. Main Street in Lexington, South Carolina continue to serve as an office for SCWU customers?

Yes.

-Michael Cartin

- 1-54 In regard to Paragraph 11, Item (a).x of the Asset Purchase Agreement, provide the job title along with a detailed job description related to Keith Parnell’s employment contract. The job description should include a detailed list of job responsibilities organized in order of importance.

At this time, SCWU has not finalized a formal job title or job description for Keith Parnell. SCWU expects to utilize Keith Parnell in a similar capacity to his role with Synergy and will continue to evaluate as Keith Parnell transitions into a new role to ensure his skill set is best utilized within the Company.

-Joshua Abbotoy

- 1-55 Please compare and contrast the job duties of Keith Parnell in his current capacity with Synergy to the job duties Keith Parnell will have in his proposed role with SCWU.

Keith Parnell is currently involved in nearly every aspect of Synergy’s business. While formal job duties have not been agreed upon or determined, they will likely include more emphasis on wastewater treatment operations. SCWU intends to actively evaluate Keith Parnell’s job performance to ensure his unique skill set is best utilized to serve the needs of SCWU’s customers.

-Joshua Abbotoy

- 1-56 Please describe what additional technical, managerial, and financial abilities SCWU will provide as a result of this acquisition that Synergy does not already provide.

SCWU will provide resiliency and redundancy through the addition of its in-house engineering staff, construction professionals, wastewater operators, and information-technology team. Also, due to SCWU's integrated SAP platform, the acquisition will provide service enhancements for billing and customer service. SCWU will provide financial stability as a larger and more credit-worthy service provider.

-Michael Cartin

- 1-57 Provide a copy of the bill form to be utilized by SCWU.

Please see attachment "ORS 1-57 Sample Bill Form".

-Michael Cartin

- 1-58 Provide a copy of a disconnection of service for non-payment notice to be utilized by SCWU.

Please see attachment "ORS 1-58 Disconnect Notice".

-Michael Cartin

- 1-59 Describe SCWU customer complaint process. Please provide example documentation.

SCWU is committed to addressing all customer complaints promptly and thoroughly. Records are kept of each complaint and its resolution. The complaint process begins before a complaint is even received, in that our employees are trained and made aware of the various rules, policies, and practices related to potential complaint topics. When we receive a customer complaint, we actively listen to the customer to ensure we understand their concern before attempting to address the issue. Once we are confident that we understand the customer's concerns, we gather all the facts associated with the complaint, research the account history and prior issues resulting in work orders associated with their property. Once this process is complete, we work with the customer to find a reasonable resolution. If a satisfactory resolution is not reached within seven days, we inform the customer that we are under the jurisdiction of the Commission and that the customer may notify the ORS of the complaint. Sample documentation of a resolved complaint is provided as Attachment 1-59 Sample Complaint.

-Becky Dennis

- 1-60 Provide a list of changes that SCWU intends to make to existing processes utilized by Synergy. Include such processes as:

- a. Schedule for billing customers;

SCWU does not intend to make changes to customer billing schedules.

b. Deposit billing process; and

Synergy currently holds customer deposits. SCWU does not currently collect deposits from customers and does not intend to continue Synergy's practice of collecting customer deposits. Following acquisition, as part of its welcome letter to customers, SCWU will notify customers that any deposit held by the utility will be returned within two billing cycles following the acquisition.

c. Non-pay disconnect process.

SCWU does not intend to make changes to the existing non-pay disconnect process currently utilized by Synergy.

-Michael Cartin

1-61 Please submit an updated copy of the Authorized Utility Representative form for SCWU.

See attachment "ORS 1-61 AURF".

-Michael Cartin

1-62 Does Synergy collect deposits for current customers? If the answer is in the affirmative:

- a. Please describe how existing Synergy customer deposits will be managed by SCWU and provide an example of a customer communication notifying impacted customers what to expect for their existing deposits.

Synergy currently holds customer deposits. SCWU does not currently collect deposits from customers and does not intend to continue Synergy's practice of collecting customer deposits. Following acquisition, as part of its welcome letter to customers, SCWU will notify customers that any deposit held by the utility will be returned within two billing cycles following the acquisition.

-Keith Parnell & Keith Morgenroth

1-63 Provide a copy of any Service Terms and Conditions used by SCWU provided to customers upon request.

See attachment "ORS 1-63 Service Terms and Conditions" and other service terms and conditions outlined in Synergy's current tariff, attachment "ORS 1-63 Synergy Tariff".

-Michael Cartin

1-64 Please identify and describe any financial impacts experienced by Synergy related to the COVID-19 Pandemic (e.g., increased bad debt, arrearages, Paycheck Protection Program Loans, etc.). If any exist:

- a. How has Synergy accounted for these financial impacts on its accounting books and records?
- b. How will this acquisition impact these items?

The requested information is not available at this time and will be provided as soon as it is compiled. Applicants expect to provide it on or before June 4, 2021. .

-Keith Parnell & Brian Bahr

- 1-65 SCWU currently has two (2) performance bonds in the amount of \$350,000 on file with the Commission; one (1) for water and one (1) for sewer. Please explain whether this acquisition will result in a change to the performance bond requirements of SCWU.

If approved, this acquisition will not result in a change to the performance bond as SCWU already has the maximum level of bonds on file for both water and wastewater.

-Michael Cartin

- 1-66 Provide a copy of the Utility Tariff for both water and wastewater services SCWU intends to file for approval with the Commission. The tariff should include, but not be limited to, a schedule of recurring and non-recurring charges, terms and conditions related to service, customer billing, toxic and pretreatment effluent guidelines, construction standards, extension of utility services lines and mains, definitions and other term, condition, policy or practice of rendering water and sewer service (i.e., tampering charges, limitation of liability).

See attached ORS “1-66 Tariff” for a copy of the tariff SCWU intends to file with the Commission for approval.

-Michael Cartin

- 1-67 In Order No. 2018-369, Docket No. 2017-28-S, the Commission ruled that the provisions of Commission Order No. 2018-308, Docket No. 2017-381-A, which required all South Carolina utilities to establish a regulatory liability to track and defer the impacts from Public Law No. 115-97, also known as the Tax Cuts and Jobs Act (“TCJA”) applied to Synergy and that the issue would be addressed during the next rate case of other proceeding.³ Please provide the general ledger account Synergy has utilized for the creation of the regulatory liability and provide the account balance as of March 31, 2021, along with a detailed calculation of the account balance. In addition, please describe how SCWU or Synergy proposes to comply with Commission Order Nos. 2018-308 and 2018-369 as they relate to Synergy.

The requested information is not available at this time and will be provided as soon as it is compiled. Applicants expect to provide it on or before June 4, 2021.

³ PSC Order No. 2018-369; Section E; Page 11

-Keith Parnell & Brian Bahr

- 1-68 The TCJA made certain changes to federal tax law that have an impact on developers making infrastructure investments in the form of Contributions in Aid of Construction (“CIAC”). CIAC represents the amount of money or property advanced or contributed by a developer to ensure that the expansion of water or wastewater service to new customers or new locations does not unfairly burden a utility’s existing customers. As a result of the TCJA, CIAC is now considered federal taxable income to water and wastewater utilities. Please provide SCWU’s policy and accounting method for the gross-up of developer contributed assets, whether in kind or cash in accordance with Commission Order No. 88-237.

Synergy has a zero net book value in its recorded CIAC. Further, Synergy and SCWU are not currently receiving any CIAC assets. If there are CIAC assets received in the future, SCWU will evaluate which approved gross-up methodology is most appropriate in accordance with Commission Order No. 88-237.

-Victoria Shupak

May 26, 2021

IN RE: Joint Application for Approval of	)	SOUTH CAROLINA OFFICE OF
the Sale of Assets and Transfer of	)	REGULATORY STAFF'S SECOND
Facilities, Territory, and Certificate of	)	AND CONTINUING REQUEST FOR
Public Convenience and Necessity from	)	BOOKS, RECORDS, AND OTHER
Synergy Utilities, L.P to South Carolina	)	INFORMATION
Water Utilities, Inc.)	

TO: CHARLES L.A. TERRENI, ESQUIRE AND SCOTT ELLIOTT, ESQUIRE,
COUNSEL FOR SYNERGY UTILITIES, L.P. AND SOUTH CAROLINA WATER
UTILITIES, INC.

I. INSTRUCTIONS

The South Carolina Office of Regulatory Staff (“ORS”) hereby requests pursuant to S.C. Code Ann. §§ 58-4-55 and 58-5-230 that Synergy Utilities, L.P (“Synergy”) and South Carolina Water Utilities, Inc. (“SCWU”) (“collectively the Joint Applicants”) provide responses in writing, electronically where required, and serve the undersigned by **July 6, 2021**, to ORS at 1401 Main Street, Suite 900, Columbia, South Carolina, 29201. If you are unable to respond to any of the requests, or part or parts thereof, please specify the reason for your inability to respond and state what other knowledge or information you have concerning the unanswered portion.

As used in these requests, “identify” means, when asked to identify a person, to provide the full name, business title, address and telephone number. As used in these requests, “address” means mailing address and business address.

When asked to identify or provide a document, “identify” and “provide” mean to provide a full and detailed description of the document and the name and address of the person who has custody of the document. In lieu of providing a full and detailed description of a document, a copy of the document may be attached with the identity of the person who has custody of it. When the word “document” is used herein, it means any written, printed, typed, graphic, photographic, or electronic matter of any kind or nature and includes, but is not limited to, statements, contracts, agreements, reports, opinions, graphs, books, records, letters, correspondence, notes, notebooks, minutes, diaries, memoranda, transcripts, photographs, pictures, photomicrographs, prints, negatives, motion pictures, sketches, drawings, publications, and tape recordings.

Wherever in this request a masculine pronoun or possessive adjective appears, it refers to both males and females in accordance with traditional English usage.

IT IS THEREFORE REQUIRED:

- Pursuant to S.C. Code Ann. § 58-4-55(A), that responses be submitted under oath.
- In addition to the signature and verification at the close of the responses, the witness(es), employee(s), contractor(s), or agent(s) responsible for the information contained in each response shall be indicated at the bottom of each response.
- All information provided shall be provided in electronic form only unless otherwise requested. All information available in Excel spreadsheets shall be provided in Excel. All Excel spreadsheets shall be working copies with all formulas, links, and calculations intact.
- All electronic documents provided must be provided in native file format with all formulas, links, and calculations intact. Responses containing .pdf documents must be searchable. Each electronic file must be clearly marked with the Response number.
- Any inquiries or communications relating to questions concerning clarification of the information requested below should be directed to Kyle D. Maurer Sr., PhD, P.E. [803.737.0959], Daniel P. Hunnell [803.737.0780], Benjamin P. Mustian, Esquire [803.737.0898] or Alexander W. Knowles, Esquire [803.737.0889] of ORS.
- That the responses be sent electronically to Kyle D. Maurer Sr., PhD, P.E. at kmaurer@ors.sc.gov, Daniel P. Hunnell at dhunnell@ors.sc.gov, Benjamin P. Mustian,

Esquire at bmustian@ors.sc.gov, and Alexander W. Knowles, Esquire at aknowles@ors.sc.gov.

- That this entire list of requests be reproduced and included in front of each set of responses.
- If the response to any request is that the information requested is not currently available, please advise ORS and state when the information requested will be available and provided to the ORS. This statement is not a waiver of the deadline for all other responses.
- This request is continuing and requires the Company to supplement or amend its responses as any additional information becomes available.
- For every page produced to ORS that contains confidential information, the page is to be marked “CONFIDENTIAL” in the header. Any specific information which the Company designates as confidential information must also be marked by notation, highlighting, or other conspicuous means.
- The following definitions shall apply:
 - a. Goodwill. Goodwill is an asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognized. The terms “goodwill” and “acquisition premium” are used interchangeably for ratemaking purposes and for the purposes of this request.
 - b. Transaction costs. Transaction costs include any costs incurred in connection with completion of the acquisition of Synergy and/or its assets, facilities, territory, and Certificate of Public Convenience and Necessity by SCWU including the costs of obtaining all necessary regulatory approvals for the sale and any payments identified in the Agreement. Examples of such costs include, but are not limited to, legal fees and expenses, regulatory filing fees, costs of developing and pursuing regulatory approvals, accounting fees, interest, prepayment penalties, financial advisory fees, and banking fees.
 - c. Transition costs. Transition costs are generally costs arising from the activities necessary to integrate the purchased entity into the acquiring entity. Examples of transition costs include but are not limited to, those costs related to the integration of financial, IT, human resource, billing, accounting, and telecommunications systems and processes. Other examples of costs may include, but are not limited to, severance payments to employees, costs related to changes to signage, the cost of transitioning employees to post-merger employee benefit plans, legal fees, and expenses related to the resolution of the NPDES permit for Raintree Acres (SC0039055) and wholesale wastewater treatment agreement with City of Orangeburg Department of Public Utilities (“Orangeburg DPU”), and termination of any duplicative leases, contracts, operations.

II. REQUESTS

Questions about SCWU and SouthWest Water Company ("SWWC")

- 2-1 Follow up to AIR 1-9. Provide an allocation of the total amount of corporate overhead identified in the Company's response to AIR 1-9 between the service territories of TJ Barnwell, Harbor Island and Synergy.

The total amount of estimated corporate overhead identified in the Company response to AIR 1-19 relates only to Synergy as TJ Barnwell and Harbor Island were acquired in 2020 and therefore, not allocated corporate overhead in the first year of acquisition in accordance with the SouthWest Water Cost Allocation Manual.

-Mujeeb Hafeez

- 2-2 Follow up to AIR 1-11. The Corporate Allocation Manual provided in response to AIR 1-6 indicates "shared services are provided by SWWC corporate functions of management, legal, information technology, finance, human resources and facilities." In response to AIR 1-11 SCWU stated "[t]here are no existing contractual relationships between SCWU, and SWWC or any of its subsidiaries." Do any contractual agreements/affiliated interest agreements exist which establish the terms and conditions under which SWWC, or some other SWWC subsidiary, provides shared services to SCWU? If the answer is in the affirmative, please provide a copy of such agreement(s).

There are no other existing contractual agreements between SCWU and its affiliates other than the Cost Allocation Manual previously provided in response to AIR 1-11.

-Mujeeb Hafeez

- 2-3 If no contractual agreement/affiliated interest agreement exists which establishes the terms and conditions under which SWWC, or some other SWWC subsidiary, provides shared services to SCWU, please explain why some SWWC subsidiary utilities have such agreements in other jurisdictions (e.g., see Exhibit A) and why such agreement(s) should not be in place for SCWU.

The Management Services Agreement in place specifically between SWWC and its subsidiaries in California and Oregon was prepared prior to the establishment of the Cost Allocation Manual. The effective date of the Management Services Agreement was June 2, 2017, whereas the Cost Allocation Manual currently in use was established in August of 2019. There is no need for a management services agreement between SWWC and its S. Carolina subsidiaries because such an agreement would be redundant with the Cost Allocation Manual, which serves the same purpose (generally describe shared services provided, affiliate relationships, and cost allocation methodologies).

-Brian Bahr

- 2-4 Follow up to AIR 1-12. Confirm that, following the closing of this acquisition, SWWC will not seek to use its SCWU subsidiary as a guarantor of any debt for SWWC or any other SWWC affiliate and that any debt incurred by the SCWU subsidiary will only be utilized for purposes specific to the SCWU system and operations.

SWWC will not seek to use its SCWU subsidiary as a guarantor of any debt of SWWC or any other SWWC affiliate unless the debt is incurred for purposes specific to the SCWU system and operations.

-Dan Medina

- 2-5 Follow up to AIR 1-12. Prior to and including the date of closing of this acquisition, will SWWC have used its SCWU subsidiary as a guarantor of any debt or collateral for SWWC or any other SWWC affiliate for purposes other than the SCWU system and operations? If the answer is in the affirmative, please provide details of such debt.

Prior to and including the date of closing of this acquisition, SWWC has not used its SCWU subsidiary as a guarantor of any debt or collateral for SWWC or any other SWWC affiliate for purposes other than the SCWU system and operations.

-Dan Medina

- 2-6 Follow up to AIR 1-20. Provide details of the existing debt instrument(s) to be used to fund to the asset acquisition. For each debt instrument, whether short-term or long-term debt, identify the current debt holder, issue date, maturity date, original principal amount, amount outstanding, and interest rate.

The debt funding used to close the transaction will be sourced from short-term intercompany advances from SWWC.

-Dan Medina

- 2-7 Follow up to AIR 1-20. Provide details of the source(s) of equity by type/category of equity to be used to fund the asset acquisition.

The equity funding used to close the transaction will be provided to SCWU in the form of common equity, contributed by SWWC to its immediate subsidiary, Southeast Utility Systems, Inc. and downstreamed via corollary equity contributions into SCWU. SWWC will source the equity funding from cash on hand.

-Dan Medina

- 2-8 Follow up to AIR 1-21. Given that no cost studies or cost analyses were performed as part of the acquisition, please provide quantifiable support for SCWU's statement that "SCWU believes that there can be improvements in reliability and resiliency with the acquisition." The response should highlight specific, quantifiable aspects of Synergy's existing

reliability and resiliency relative to the improvements in reliability and resiliency to be implemented by SCWU.

Current Synergy owner, Keith Parnell, is the only current Synergy employee with the proper wastewater operator's license to operate the Bush River and Raintree WWTPs. Synergy has only one other employee who is a licensed professional engineer, Ken Parnell, who works in a limited capacity for the company. If for any reason Keith Parnell was not able to be on-site handling the daily operation and maintenance required of Synergy's wastewater systems, Synergy would have to search for assistance elsewhere to ensure compliance of treatment plants and responsiveness to customer emergencies. SCWU has the ability to provide the additional human resources necessary to operate these treatment facilities and respond to customer's needs. This would provide improvements in reliability and resiliency within Synergy's systems.

Being part of a company that operates nationally, SCWU has access to resources otherwise unavailable. Though it is not anticipated at this time, should a natural disaster occur, SCWU would be able to respond in a timely, cost-efficient manner. By way of example, when severe flooding hit southeast Texas in 2017 following Hurricane Harvey, many customers were affected. The local customer call center was unable to open, but SouthWest rerouted customer calls to the call center of another subsidiary in California. Another example of resiliency and reliability being improved through affiliate relationships occurred when severe winter storms hit Texas in 2021, resulting in freezing temperatures, frozen roads, and power blackouts. Teams of operators from all over the country descended on Texas to help fix leaks and stabilize water systems. In both of the above instances, the local utility's ability to draw resources from a larger organization resulted in benefits to customers.

-Michael Cartin

- 2-9 Follow up to AIR 1-47. It is ORS's understanding Synergy owns and operates two pump stations within the Northwoods subdivision. Please explain why there is no amount recorded under Section 3 Pumping Equipment on either Schedule 201 or Schedule 202 within the response to AIR 1-47. If necessary, please provide an updated Schedule 201 and Schedule 202.

The omission was inadvertent. Please see Attachment "ORS Response AIR 2-9" for revised schedules 201 and 202 (Northwoods only).

-Keith Parnell

- 2-10 Follow up to AIR 1-53. Please estimate the length of time SCWU will utilize the existing Synergy utility office located at 816 E. Main Street in Lexington, South Carolina.

SCWU estimates using the existing Synergy utility office for approximately one year after closing.

-Michael Cartin

- 2-11 Follow up to AIR 1-58. Provide a revised Notice of Disconnect which complies with Regulation 103.535.1.

Please see attached file "ORS Response AIR 2-11" for copies of the 10-day and 30-day notices. If approved, letters will be modified to identify the utility as "South Carolina Water Utilities" instead of "Palmetto Wastewater Reclamation".

-Michael Cartin

- 2-12 Follow up to AIR 1-62. Provide a spreadsheet (in Excel format) of Synergy customers with an active security deposit or who had a security deposit that has been refunded in the past 36-months. The spreadsheet should include the following:
- a) Customer name;
 - b) Customer Account Number;
 - c) Date of the Deposit;
 - d) Deposit Amount;
 - e) Deposit Interest Accrued;
 - f) Deposit Interest Paid;
 - g) Date of Interest Paid;
 - h) Date of Deposit Refund;
 - i) Deposit Refund Amount;
 - j) Amount of Unclaimed Deposits; and
 - k) Any applicable Notes Regarding the Customer Deposit.

Please see Attachment "ORS Response AIR 2-12."

-Keith Parnell

- 2-13 Follow up to AIR 1-62. Provide a copy of customer communication related to deposit refunds identified in response to AIR 1-62.

Please see Attachment "ORS Response AIR 2-13" for a copy of a draft notice to be provided to customers.

-Michael Cartin

- 2-14 Provide a copy of SCWU's balance sheet as of May 31, 2021.

Please see attached file "ORS Response AIR 2-14".

-Becky Dennis

- 2-15 Provide a full customer list for the Northwood Estates subdivision. This list should include:

- 2-15.1 Customer name;
- 2-15.2 Customer account number;
- 2-15.3 Customer address;
- 2-15.4 Customer phone number; and
- 2-15.5 Customer email.

Please see “Attachment ORS Response AIR 2-15.”

-Keith Parnell

September 6, 2021

**SANITARY SEWER SYSTEM EVALUATION
FOR NORTHWOOD ESTATES COLLECTION SYSTEM
FOR
COUNTY OF ORANGEBURG**

Prepared for:



County of Orangeburg, South Carolina
1437 Amelia Street
Orangeburg, South Carolina 29115

Prepared by:



AECOM
101 Research Drive
Columbia, South Carolina 29203

*Project Number 60517212
April 2017*

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SECTION 1: INTRODUCTION

The County of Orangeburg requested AECOM to conduct an evaluation of the Northwoods Estates subdivision wastewater collection system that is presently owned and operated by Midland's Utility, Inc. The existing system is shown in Figure 1-1 – Northwood Estates Sewer System Map.

The Northwood Estates sewer system consists of two drainage basins. Both basins drain to pump stations:

- Pump Station #1
- Pump Station #2

The Northwood Estates collection system includes approximately 42 manholes and approximately 9,000 linear feet of gravity sewer.

This report is an assessment of the wastewater system and includes recommendations and a preliminary cost estimate to address recommendations.

The following includes general information on the owner and engineer for this project:

Owner:

County of Orangeburg, SC
1437 Amelia Street
Orangeburg, South Carolina 29115
(803) 531-1302
John E. McLaughlin, Jr., County Engineer

Engineer:

AECOM
101 Research Drive
Columbia, South Carolina 29203
(803) 254-4400
Tom Haselden, PE





SECTION 2: BASIN INVESTIGATION

The collection system analysis is categorized into three classifications of investigation;

- Manhole Inspection
- Smoke Testing
- Pump Station Assessment
- Pipeline Closed Circuit Television (CCTV) Inspection

Manhole inspections and smoke testing results were utilized in identifying which sections of the sewer system were in need of further investigation by closed circuit television (CCTV).

2.1 Manhole Inspection

Manholes are a prominent source of infiltration/inflow (I/I). Manhole inspections can identify defects in manholes as well as additional sources of I/I. Manhole inspections were completed on 42 manholes. Manhole inspections identify the types of defects as well as the severity of the defect. Manhole inspections require the examination of the following:

- Cover/Lid/Frame
- Chimney
- Cone
- Wall
- Bench
- Channel
- Steps
- Pipe Connections

2.2 Smoke Testing

Smoke testing can reveal cross connections, illegal taps, and other means of I/I into the collection system. Smoke testing in areas with high water tables or standing water will limit the effectiveness of the smoke testing. Approximately 9,000 linear feet of gravity sewer lines were smoke tested. Identified defects were noted, photographed, and GPS located. Smoke testing uses an air blower to fill the sewer pipe with smoke, and identify leaks in the system.

2.3 Pump Station Assessment

Pump station assessment can identify equipment and structural defects that may affect the operation of the collection system, as well as noncompliance with Code and Occupational Safety and Health Administration (OSHA) regulations. Two (2) pump stations were assessed for both mechanical and electrical deficiencies.

2.4 Closed Circuit Television (CCTV) Inspection

Based on the findings of the manhole inspections and smoke testing, portions of the collection system were recommended for CCTV inspection for further evaluation. The CCTV inspections consist of digital video recordings as well as digital photos. CCTV was conducted by PASCON. Approximately 6,100 of 9,000 linear feet of gravity sewer lines were identified as needing CCTV inspection in the Northwoods Estates sewer collection system. Lines were tested along the following streets:

- Arquette Court
- Colonial Drive
- Lake Drive
- Northwood Drive
- Oaklane Drive

Figure 2-1 illustrates the location of the pipelines televised.



SECTION 3: RESULTS

Results of the basin investigation can be categorized into four (4) categories;

- Manhole Defects
- Smoke Testing Leaks
- Pump Station Assessment
- Pipeline Defects

3.1 Manhole Defects

During the manhole inspection portion of the basin investigation it was found that 14 manholes of the 42 manholes in the collection system had evidence of surcharge or were surcharged. Figure 3-1 illustrates the location of the manholes that had evidence of surcharged or were surcharged during the basin investigation.

During the manhole inspection portion of the basin investigation it was found that 29 manholes of the 42 manholes in the collection system had some type of defect. Below is a breakdown of prominent defects:

- 3 manholes had built up debris or obstruction in the channel of the manhole affecting flow through the manhole.
- 13 manholes had a defective frame seal
- 19 manholes with corroded frames
- 8 manholes had roots

Figure 3-2 illustrates the location of the manhole defects found during the basin investigation and Table 3-1 contains a listing of manholes and defects.





Table 3-1: Manhole Defects

Manhole Number	Defect	Evidence of Surcharge
1	Stained Frame Seal	No
2	No Defect	No
3	Corroded Frame	No
4	Corroded Frame, Offset Frame Seal	Yes
5	Corroded Frame	Yes
6	Corroded Frame	No
7	Corroded Frame	No
8	Roots	Yes
9	Corroded Frame, Roots	No
10	Corroded Frame	No
11	No Defect	No
12	No Defect	No
13	Weeping Frame Seal	No
14	Cracked/Stained Frame Seal	Yes
15	Stained Frame Seal	Yes
16	No Defect	Yes
17	No Defect	Yes
18	No Defect	No
19	Stained Frame Seal	Yes
20	No Defect	Yes
21	Corroded Frame	Yes
22	No Defect	Yes
23	Corroded Frame, Missing Frame Seal	Yes
24	Stained/Offset Frame Seal (4"), Roots	No
25	Debris, Deposits (Fine), Corroded Frame, Missing Frame Seal	No
26	Cracks, Corroded Frame, Stained Frame Seal	No
27	Cracks, Debris, Deposits, Corroded Frame, Cracked/Stained Frame Seal	No
28	Roots	No
29	No Defect	No
30	No Defect	No

Manhole Number	Defect	Evidence of Surcharge
31	Offset Frame Seal (3"), Unlevel Frame	No
32	No Defect	No
33	No Defect	No
34	No Defect	No
35	Roots, Corroded Frame	No
36	Infiltration, Corroded Frame	No
37	Infiltration, Roots	No
38	Infiltration, Roots, Corroded Frame	No
39	Infiltration, Corroded Frame	Yes
40	Roots, Debris, Corroded Frame	Yes
41	Cracks, Corroded Frame	No
42	Corroded Frame, Stained Frame Seal	No

3.2 Smoke Testing Leaks

During smoke testing one leak was discovered in the collection system. The source of the leak was the frame seal of Manhole #24.

Figure 3-3 illustrates the location of the smoke testing leak that was identified.



3.3 Pump Station Assessments

Mechanical and electrical defects were found during the assessment of both Pump Station #1 and Pump Station #2.

Pump Station #1 is located on Oaklane Drive, directly south of Manhole #4. It pumps to Manhole #24 at which point the flow is conveyed by gravity to Pump Station #2. Both pump stations are submersible duplex pump stations. The following defects were noted at Pump Station #1:

- Mechanical
 - Float controls were not working properly during the assessment.
 - The pumps are not on a slide rail system. Piping inside of the wetwell must be disconnected to remove a pump. The wetwell does not appear large enough to accommodate a slide rail system.
 - The valves are located in a vault with a standard manhole cover. Valves are not easily accessible for operation and maintenance.
 - Shutoff valves are standard gate valves.
 - Check valves do not have outside levers to indicate position.
 - There are no pressure gauges.
 - The pump motors are single phase.
 - There is not a yard hydrant at the station.
- Electrical
 - Power provided to the station is single phase power, which is not as reliable as three phase power.
 - The pump control panel and electrical equipment installation does not comply with the current National Electrical Code (NEC).
 - There are no conduit mounted hazardous location sealing hubs as required by the NEC Article 500 in the conduits between the pump station wetwell and the panel to prevent wetwell gases from entering the control panel.
 - National Fire Protection Agency (NFPA) 820 requires that electrical equipment be explosion-proof if installed within a 5 foot radius of the wetwell vent and within 3 feet horizontal distance from the wetwell hatch.
 - OSHA requires protection of electrical components from deteriorating agents per federal law 29CFR 1910.303(b).
 - The panel does not have a voltage warning placard per OSHA regulation 29CFR 1910.303(e).
 - The exposed PVC conduits are exposed to sunlight and will become brittle over time; these should be metallic.
 - The interior of the control panel is in poor condition, and the enclosure should be stainless steel.
 - The support structure for the control panel and electrical equipment is not corrosion resistant; all support members should be made of non-corrosive materials.

- Grounding conductor(s) are exposed and should be installed in PVC conduit from the enclosure to the ground rod for protection against corrosion and for safety per NEC Article 300.
- Float cables are spliced inside of the wetwell. Splices should be outside of the classified area in an approved and accessible junction box with insulated connectors.

The following defects were noted at Pump Station #2:

- Mechanical
 - The valves are located in a vault with a standard manhole cover. Valves are not easily accessible for operation and maintenance.
 - Shutoff valves are standard gate valves.
 - Check valves do not have outside levers to indicate position.
 - There are no pressure gauges.
 - The flow meter is located in a vault with a standard manhole cover. The flow meter is not easily accessible.
 - The PVC wetwell vent pipe is deteriorated.
 - The area adjacent to the station has excessive erosion.
 - There is not a yard hydrant at the station.
- Electrical
 - Power provided to the station is single phase power which is not as reliable as three phase power; the control panel has an add-a-phase device to convert the single phase service to three phase required for the three phase pump motors.
 - The support structure for the control panel and electrical equipment is not corrosion resistant; all support members should be made of non-corrosive materials.
 - There are no conduit mounted hazardous location sealing hubs as required by the NEC Article 500 in the conduits between the pump station wetwell and the panel to prevent wetwell gases from entering the control panel.
 - Grounding conductor(s) are exposed and should be installed in PVC conduit from the enclosure to the ground rod for protection against corrosion and for safety per NEC Article 300.
 - Float cables are spliced inside of the wetwell. Splices should be outside of the classified area in an approved and accessible junction box with insulated connectors.
 - The pump station is equipped with telephone service for an auto-dialer for alarm notifications; this enclosure should be of the required depth to properly mount the equipment.

3.4 Pipeline Defects

CCTV inspections were used to identify pipeline defects. The NASSCO PACP® Condition Grading System was used to assign numerical ratings to the condition of each pipeline. Both an Overall Pipe Rating and a PACP Quick Rating were calculated for each pipe and these scores can be seen in Table 3-3. The truncated scores were assigned based on Table 3-2 below, with a score of 5 denoting the most severely problematic pipelines. Detailed CCTV inspection reports for the surveyed pipes can be found in Appendix B.

Table 3-2: Truncated Scoring

PACP Quick Score	Truncated Score
5100+	5
4100-4999	4
3100-3999	3
2100-2999	2
0000-1999	1

The pipelines receiving truncated scores of 1 and 2 are in acceptable condition. Pipes with ratings of 3, 4, and 5 have significant defects that need to be assessed for rehabilitation. The Overall Pipe Rating, PACP Quick Score, and Truncated Score as well as physical properties of each pipeline can be seen below in Table 3-3.

Table 3-3: Pipeline Properties and Condition Ratings

Start Manhole Number	End Manhole Number	Pipe Diameter [in]	Pipe Material	Pipe Length [ft]	Overall Pipe Rating	PACP Quick Score	Truncated Score	Comments
3	4	8	VCP	206	45	5232	5	
5	4	8	VCP		22	5141	5	Survey abandoned and resumed from opposite end
10	9	8	VCP	297.7	20	5141	5	
18	19	8	PVC	441.0	0	0000	1	
19	20	8	PVC	23.3	0	0000	1	
23	4	8	VCP	269.6	5	2113	2	
24	25	8	VCP/HDPE	152.4	10	5200	5	Pipe material change, survey abandoned and resumed from opposite end
25	27	6	HDPE	162.7	15	5300	5	Survey abandoned and resumed from opposite end
27	41	8	VCP	102.2	10	5200	5	Survey abandoned and resumed from opposite end
28	27	6	HDPE	223.0	10	5200	5	Survey abandoned and resumed from opposite end
31	30	6	HDPE	200.0	5	5100	5	Survey abandoned and resumed from opposite end
32	31	8	VCP	354.0	10	5200	5	Survey abandoned and resumed from opposite end
33	34	8	VCP	140.0	4	1400	1	

AECOM

3-11

Start Manhole Number	End Manhole Number	Pipe Diameter [In]	Pipe Material	Pipe Length [ft]	Overall Pipe Rating	PACP Quick Score	Truncated Score	Comments
34	35	8	VCP	409.0	32	312A	3	
35	36	8	VCP	402.0	12	5221	5	Segment of pipe unable to be surveyed due to intruding taps
36	37	8	VCP	150.0	14	5132	5	Survey abandoned due to roots and drop inlet at manhole
39	37	8	VCP	294.9	15	5142	5	
40	39	8	VCP	321.8	37	5443	5	
41	40	8	VCP		7	5121	5	Survey abandoned due to obstruction
42	32	6	HDPE	137.7	15	5300	5	Survey abandoned and resumed from opposite end
4	PS	8	VCP	152.6	10	5141	5	
PS	24	6/3	VCP					Unable to survey due to size change from 6" to 3"
37	PS	8	VCP	169.0	0	0000	1	

SECTION 4: RECOMMENDATIONS

4.1 Manhole Rehabilitation Recommendations

As described in Section 3.1, 29 manhole defects were identified. Recommendations and opinions for probable construction cost for each manhole defect have been summarized in Table 4-1.

Table 4-1: Manhole Recommendations and Opinion of Probable Construction Cost

Manhole Number	Defect	Recommended Action	Estimated Cost
1	Stained Frame Seal	Re-grout frame seal	\$500
3	Corroded Frame	Replace frame	\$600
4	Corroded Frame, Offset Frame Seal	Replace frame, re-grout frame seal	\$1,000
5	Corroded Frame	Replace frame	\$600
6	Corroded Frame	Replace frame	\$600
7	Corroded Frame	Replace frame	\$600
8	Roots	Remove roots and re-grout	\$800
9	Corroded Frame, Roots	Remove roots and re-grout, replace frame	\$1,300
10	Corroded Frame	Replace frame	\$600
13	Weeping Frame Seal	Re-grout frame seal	\$500
14	Cracked/Stained Frame Seal	Re-grout frame seal	\$500
15	Stained Frame Seal	Re-grout frame seal	\$500
19	Stained Frame Seal	Re-grout frame seal	\$500
21	Corroded Frame	Replace frame	\$600
23	Corroded Frame, Missing Frame Seal	Replace frame, re-grout frame seal	\$1,000
24	Stained/Offset Frame Seal (4"), Roots	Remove roots and re-grout frame seal	\$800
25	Debris, Deposits (Fine), Corroded Frame, Missing Frame Seal	Clean manhole, re-grout frame seal, replace frame	\$1,300
26	Cracks, Corroded Frame, Stained Frame Seal	Re-grout wall and frame seal	\$1,200
27	Cracks, Debris, Deposits, Corroded Frame, Cracked/Stained Frame Seal	Clean and re-grout manhole, replace frame, re-grout frame seal	\$2,100
28	Roots	Remove roots and re-grout	\$800

Manhole Number	Defect	Recommended Action	Estimated Cost
31	Offset Frame Seal (3"), Unlevel Frame	Re-grout frame seal	\$500
35	Roots, Corroded Frame	Remove roots and re-grout, replace frame	\$1,300
36	Infiltration, Corroded Frame	Re-grout manhole, replace frame	\$1,300
37	Infiltration, Roots	Remove roots and re-grout	\$800
38	Infiltration, Roots, Corroded Frame	Remove roots and re-grout, replace frame	\$1,300
39	Infiltration, Corroded Frame	Re-grout manhole, replace frame	\$1,300
40	Roots, Debris, Corroded Frame	Remove roots and re-grout, clean manhole, replace frame	\$1,600
41	Cracks, Corroded Frame	Re-grout manhole, replace frame	\$1,300
42	Corroded Frame, Stained Frame Seal	Replace frame, re-grout frame seal	\$1,000
Sub-Total Opinion of Probable Construction Cost:			\$26,800

4.2 Smoke Testing Recommendations

As seen in Table 4-1, the re-grouting of the frame seal on Manhole #24 is recommended. By doing so, the sole leak identified in the smoke test should be remedied.

4.3 Pump Station Recommendations

As described in Section 3.3, several pump station defects were identified. Recommendations and opinions for probable construction cost for each pump station have been summarized in Table 4-2 and estimated costs include bypass pumping during construction for both pump stations.

Table 4-2: Pump Station Recommendations and Opinion of Probable Construction Cost

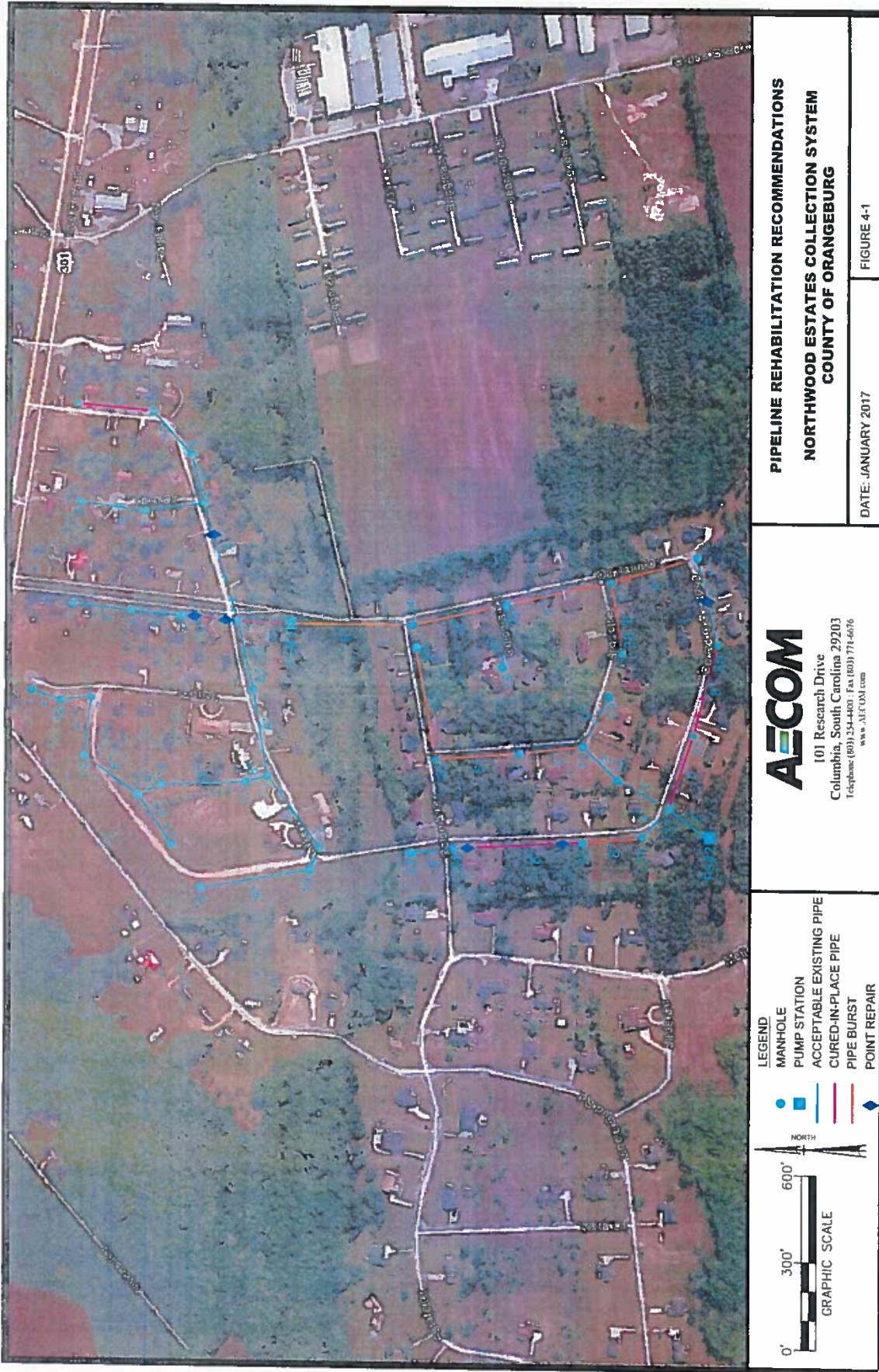
Pump Station	Recommended Action	Cost
1	• Replace with new pump station	\$172,000
	• Provide three phase power to station	\$80,000
	• Provide water service and the City's standard post hydrant	\$2,550
	• Bypass Pumping	\$40,000
2	• Provide three phase power to station	\$80,000
	• Modify electrical panel to remove "add-a-phase" device	\$63,000
	• Replace control panel supports with non-corrosive materials	
	• Relocate all electrical equipment to comply with NFPA 820	
	• Install new conduit with sealing hubs	
	• Install a transfer switch and generator receptacle	
	• Install junction box for splicing of float switch cables	
	• Install conduit for grounding conductors	
	• Replace telephone panel with a SCADA panel	
	• Install 4" wetwell vent	\$600
	• Replace flow meter vault	\$6,000
	• Grade, stabilize and install rip-rap in eroded areas adjacent to station	\$6,000
	• Replace valves and valve vault	\$20,000
	• Add pressure gauges	
	• Drain valve vault to pump station	
	• Provide water service and the City's standard post hydrant	\$2,550
	• Install confined space posting on wetwell and valve vault hatches	\$300
	• Bypass Pumping	\$10,000
Sub-Total Opinion of Probable Construction Cost		\$483,000

4.4 Pipeline Rehabilitation Recommendations

As described in Section 3.4, 19 pipelines with defects were identified. Recommendations and opinions for probable construction cost for each pipeline have been summarized in Table 4-3. A visual representation of the pipeline rehabilitation recommendations can be seen below in Figure 4-1.

Table 4-3: Pipe Recommendations and Opinion of Probable Construction Cost

Start Manhole Number	End Manhole Number	Recommended Action	Cost
3	4	Cured-In-Place Pipe	\$26,600
5	4	Point Repairs at 85' & 105'	\$18,200
10	9	Cured-In-Place Pipe	\$31,600
4	PS	Cured-In-Place Pipe	\$21,800
39	37	Cured-In-Place Pipe	\$31,600
41	40	Point Repairs at 137' & 147'	\$16,200
39	40	Cured-In-Place Pipe	\$33,900
34	35	Cured-In-Place Pipe	\$36,500
35	36	Pipe Burst to 8"	\$49,500
36	37	Root Cutting and Joint Grouting	\$14,200
PS	24	Pipe Burst to 8"	\$16,000
24	25	Pipe Burst to 8"	\$31,700
25	27	Pipe Burst to 8"	\$31,700
28	27	Pipe Burst to 8"	\$37,100
27	41	Pipe Burst to 8"	\$26,000
42	32	Pipe Burst to 8"	\$28,200
32	31	Pipe Burst to 8"	\$46,500
31	30	Pipe Burst to 8"	\$28,000
N/A	N/A	Lateral Rehab and Reconnection	\$120,000
Sub-Total Opinion of Probable Construction Cost:			\$645,300



4.5 Additional CCTV

Based on the magnitude of the results of CCTV inspection, it is recommended the remaining lines be televised to identify potential deficiencies in the remaining system.

4.6 Overall Cost Summary

Table 4-4: Total Opinion of Cost

Manhole Rehabilitation Probable Construction Cost	\$26,800
Pump Station Recommendations Probable Construction Cost	\$483,000
Pipeline Rehabilitation Probable Construction Cost	\$645,300
Additional CCTV	\$20,000
Sub-Total Probable Construction Cost:	\$1,175,100
Preliminary Engineering, Pump Station/Force Main Capacity Evaluation and Engineering Design and Construction Services	\$252,500
Legal and Contingency	\$293,400
Total Probable Project Cost:	\$1,721,000

APPENDIX A

VISUAL RESULTS OF SITE INSPECTIONS

Pump Station #1



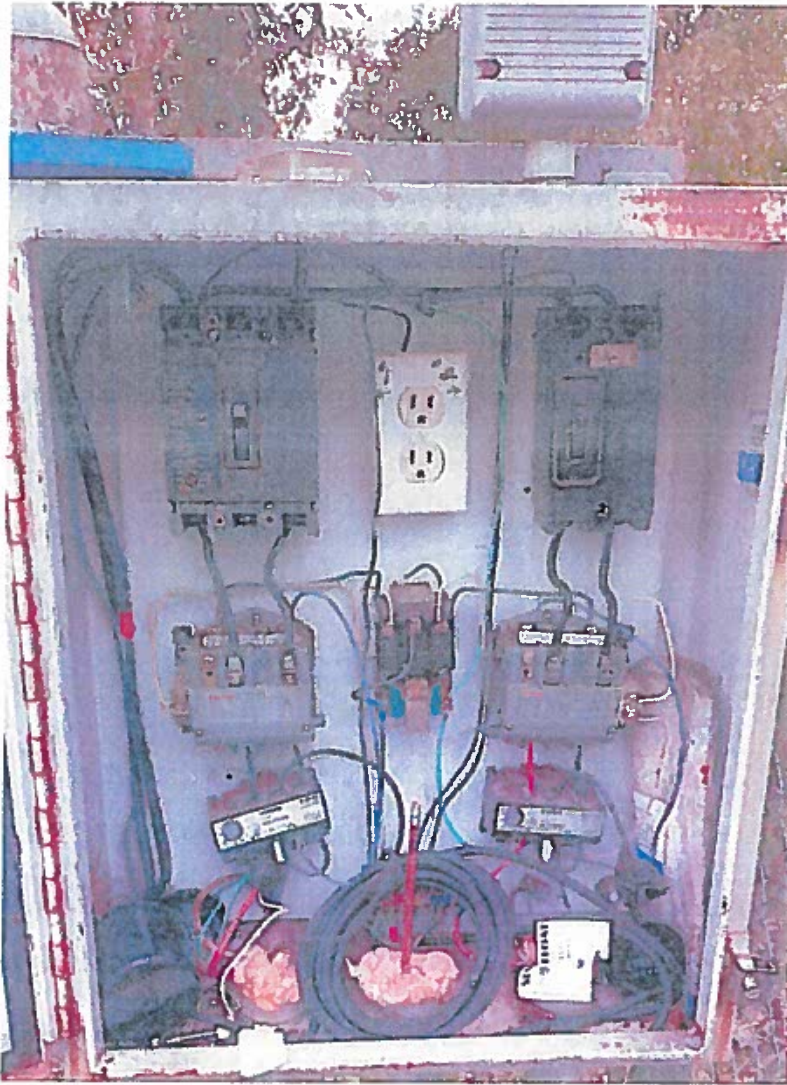
Pump station #1 is served underground by a 120/240 volt, 1-phase service by DPU.

The pump control panel and electrical equipment installation does not comply with the current National Electrical Code (NEC). There are no conduit mounted hazardous location sealing hubs as required by the NEC Article 500 in the conduits between the pump station wetwell and the panel. This could allow explosive gases to enter the control panel and cause an explosion. It also allows corrosive gases to enter the panel causing erosion of components and premature failure. NFPA (National Fire Protection Association) 820 requires that electrical equipment be explosion-proof if installed within 5' radius of the wetwell vent and within 3' horizontal distance of the wetwell hatch. Additionally, the Occupational and Safety Administration (OSHA) per federal law 29CFR 1910.303(b) requires protection of electrical components from deteriorating agents.

The panel needs a voltage warning placard per OSHA regulation 29CFR 1910.303(e).

The exposed PVC conduits are exposed to sunlight and will become brittle over time. These conduits should be metallic.

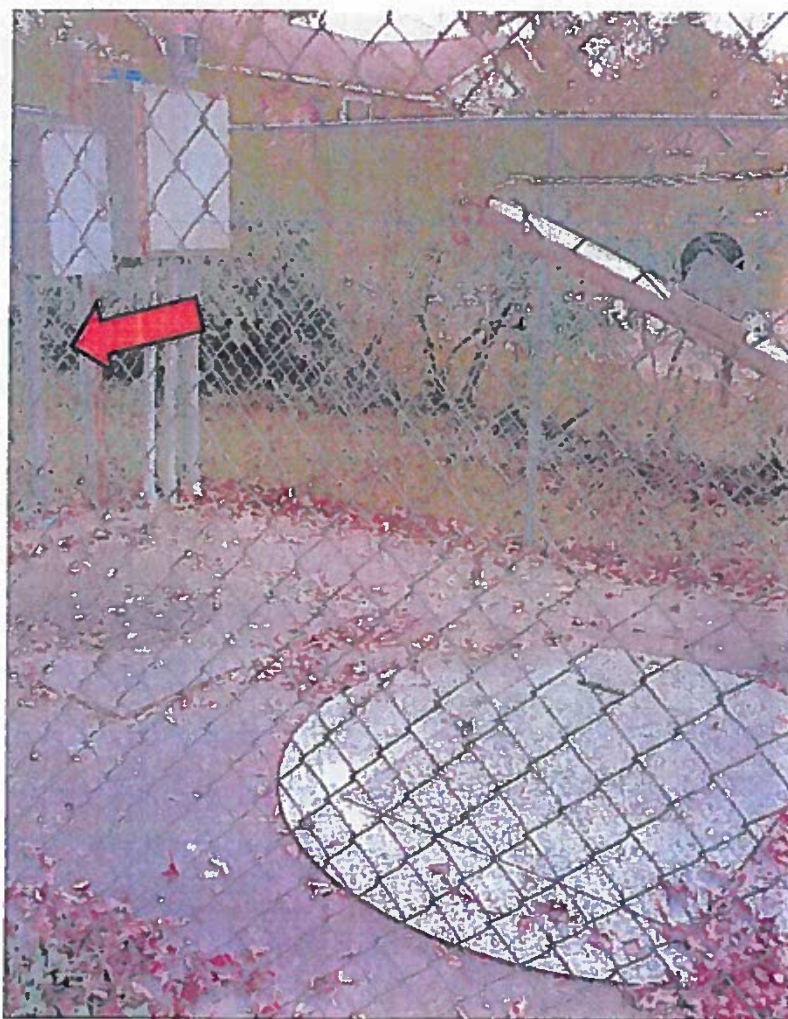
There is no transfer switch and electrical generator receptacle.



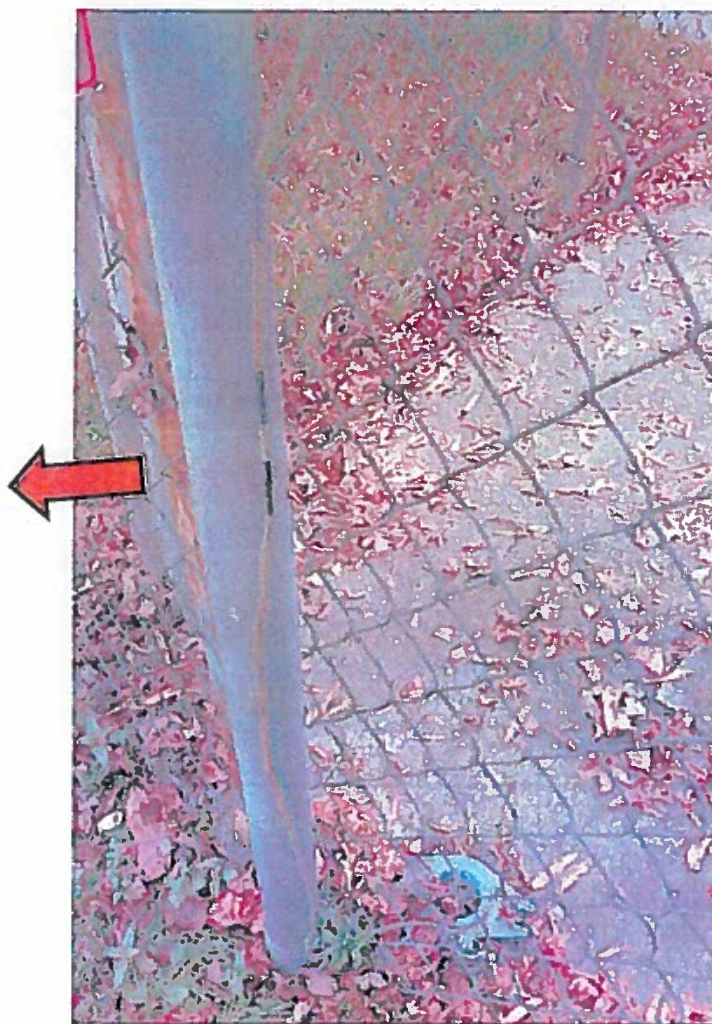
The interior of the control panel is in poor condition. Considering the corrosive environment, this enclosure should be stainless steel.



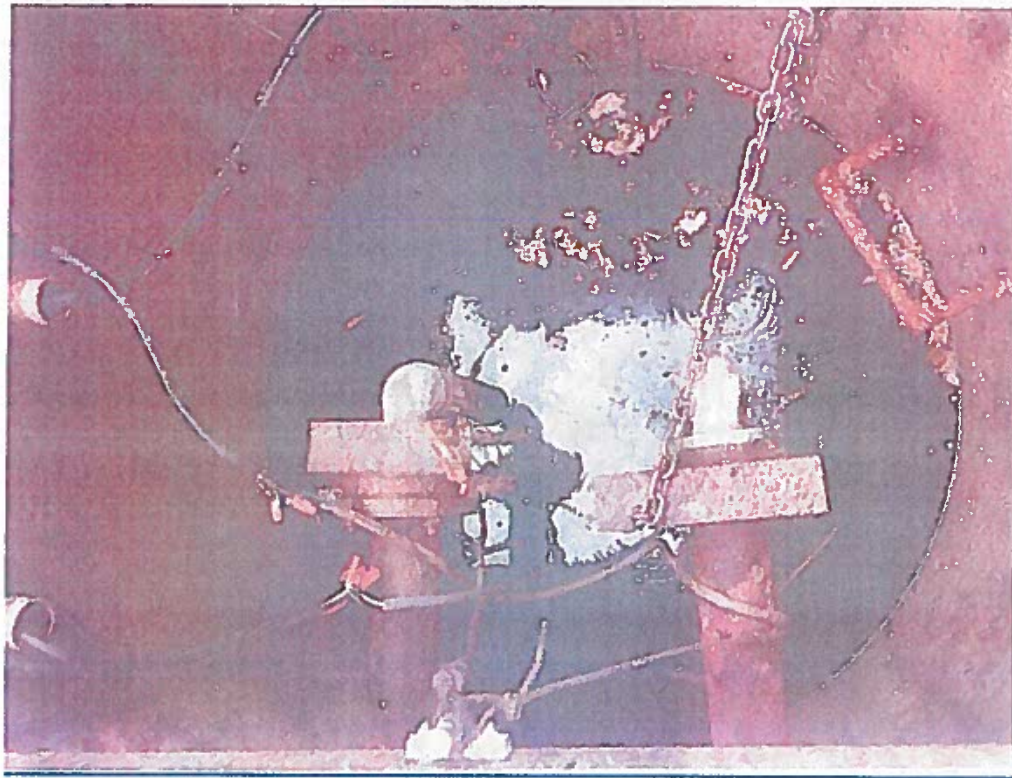
The support structure for the control panel and electrical equipment are not corrosion resistant. Considering the corrosive conditions, all support members should be of non-corrosive materials.



Per the National Electrical Code (NEC) Article 500, there should be hazardous location conduit mounted sealing hubs to prevent wetwell gases from entering the control panel.



Grounding conductor(s) should be installed in PVC conduit from the enclosure to the ground rod for protection against corrosion and for safety per the NEC Article 300.



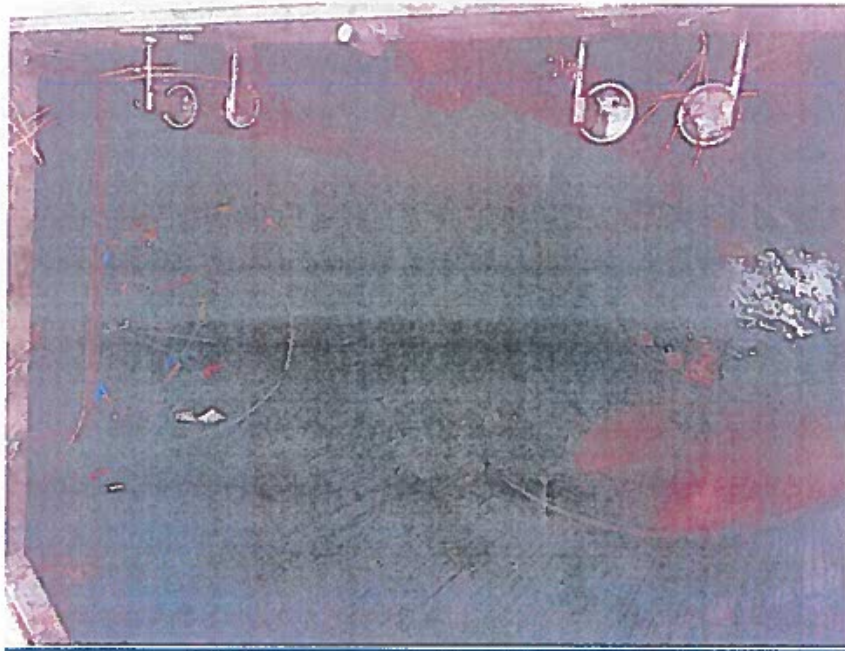
Pump Station Number 1 is a submersible duplex pump station. It pumps to Pump Station Number 2. On two occasions manhole evaluations could not be performed because the pump station was not operating. The float controls were not working properly during our evaluation of the station. The pumps are not on a slide rail system. Piping inside of the wetwell has to be disconnected to remove a pump. It appears the wetwell is not large enough to accommodate a slide rail system.

The splicing of float cables should be outside of the classified area in an approved and accessible junction box with insulated connectors.

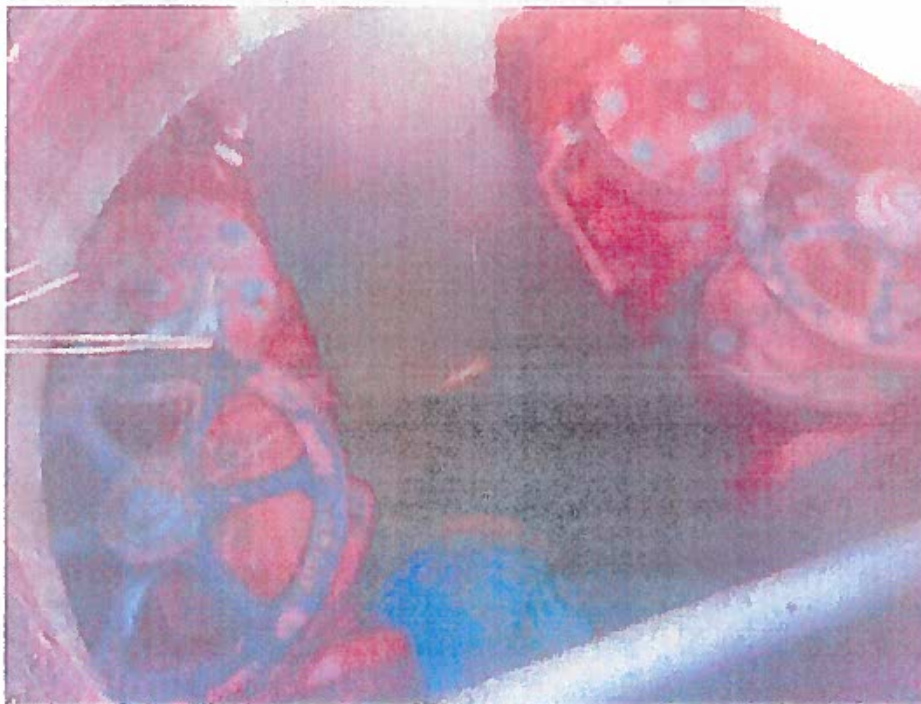


Valves are located in a vault with a standard manhole cover. Shutoff valves are standard gate valves. Check valves do not have outside levers to indicate position. Valves are not easily accessible for operation and maintenance. There are no pressure gauges.

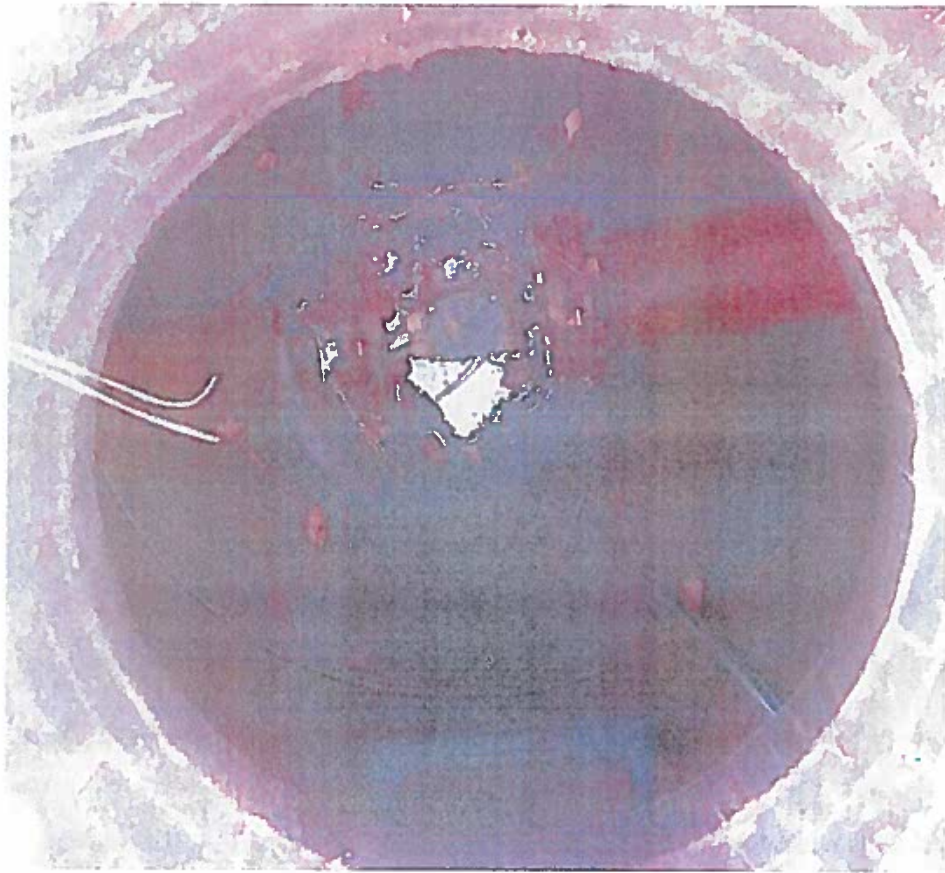
Pump Station #2



Pump Station Number 2 is a submersible duplex pump station. It pumps to the DPU sewer system. This station is in good condition. We were not able to conduct drawdown tests during our evaluation because flows were low at the time. The float controls appeared to be working properly during our evaluation of the station. A visual inspection of the wetwell did not show any signs of excessive high water levels or surcharging. Pumps inside the wetwell are connected to a slide rail system. The station has a Foxboro Magnetic flow meter which appears to be in good condition.



Valves are located in a vault with a standard manhole cover. Shutoff valves are standard gate valves. Valves are not easily accessible for operation and maintenance. Valves should be the same size as the force main to reduce excessive wear. There are no pressure gauges.



The flow meter is located in a vault with a standard manhole cover. The flow meter is not easily accessible.



The area adjacent to the station has potential for excessive erosion to the pump station site.



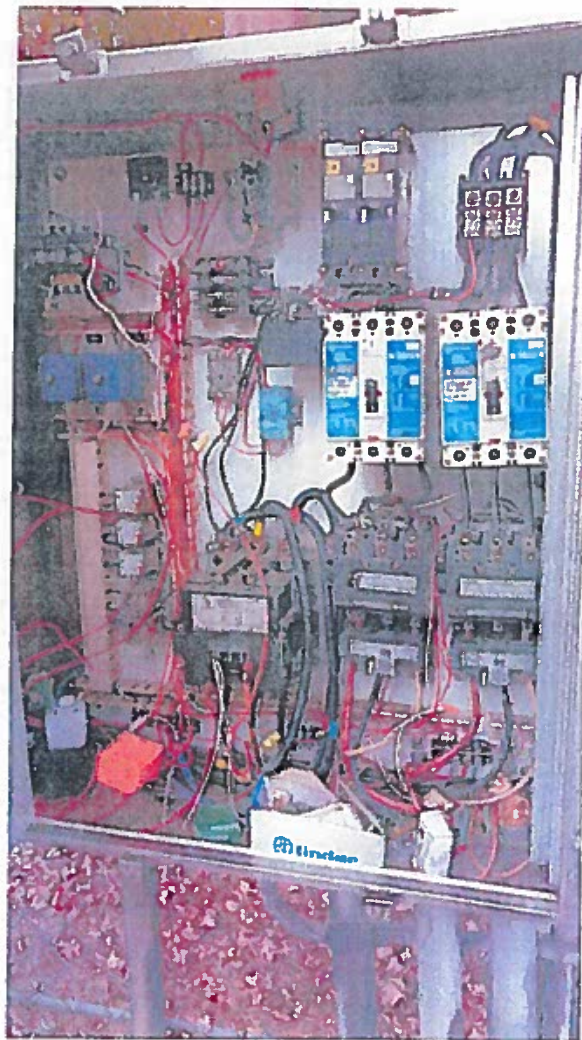
The pump control panel and electrical equipment installation does not comply with the current National Electrical Code. There are not conduit mounted hazardous location sealing hubs as required by the NEC Article 500 in the conduits between the pump station wetwell and the panel. This could allow explosive gases to enter the control panel and cause an explosion. It also allows corrosive gases to enter the panel causing erosion of components and premature failure. NFPA (National Fire Protection Association) 820 requires that electrical equipment be explosion-proof if installed within 5' radius of the wetwell vent and within 3' horizontal distance of the wetwell hatch. Additionally, the Occupational and Safety Administration (OSHA) per federal law 29CFR 1910.303(b) requires protection of electrical components from deteriorating agents.

The panel needs a voltage warning placard per OSHA regulation 29CFR 1910.303(e).

The exposed PVC conduits are exposed to sunlight and will become brittle over time. These conduits should be metallic.



Pump station #2 is served underground by a 120/240 volt, 1-phase service by Orangeburg DPU. An add-a-phase device is used to convert the 1-phase service to 3-phase power required for the pumps. There is no transfer switch and electrical generator receptacle.



The interior of the control panel is in good condition. The enclosure is stainless steel.



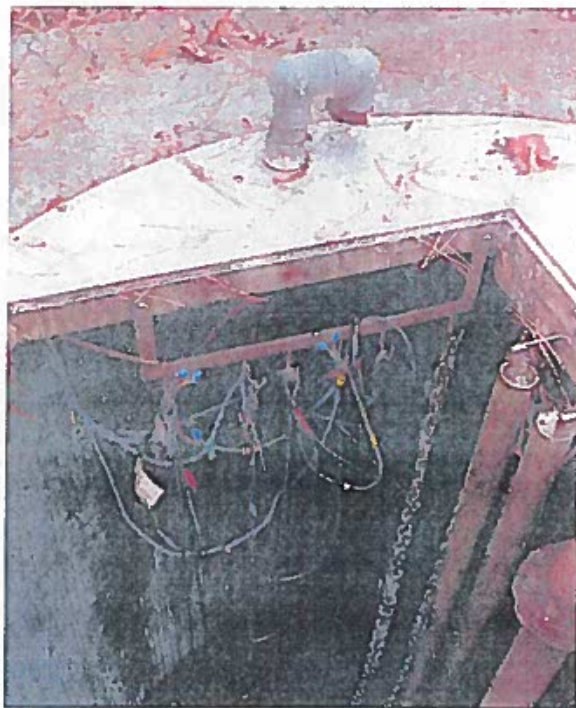
The support structure for the control panel and electrical equipment are not corrosion resistant. Considering the corrosive conditions, all support members should be of non-corrosive materials.



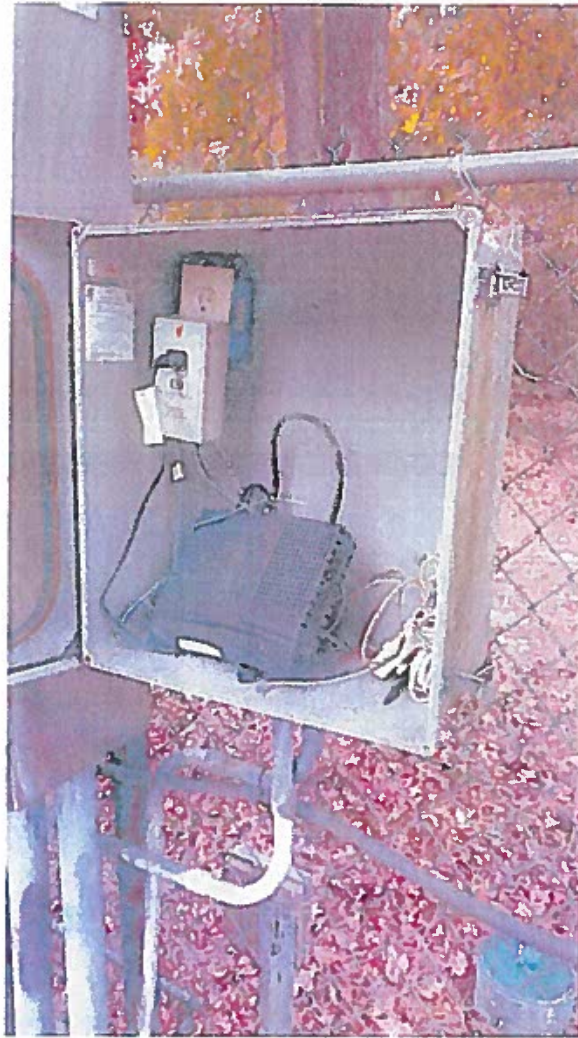
Per the National Electrical Code (NEC) Article 500, there should be hazardous location conduit mounted sealing hubs to prevent wetwell gases from entering the control panel.



Grounding conductor(s) should be installed in PVC conduit from the enclosure to the ground rod for protection against corrosion and for safety per the NEC Article 300.



The splicing of float cables should be outside of the classified area in an approved and accessible junction box with insulated connectors.
Wetwell vent is deteriorated and needs to be replaced.



Pump Station #2 is equipped with telephone service for an auto dialer for alarm notifications. This enclosure should be of the required depth to properly mount the equipment.

Table 4-1: Manhole Recommendations and Opinion of Probable Construction Cost
August 19, 2019

Manhole Number	Defect	Recommended Action	Estimated Cost
1	Stained Frame Seal	Re-grout frame seal	\$600
3	Corroded Frame	Replace frame	\$1,000
4	Corroded Frame, Offset Frame Seal	Replace frame, re-grout frame seal	\$1,500
5	Corroded Frame	Replace frame	\$1,000
6	Corroded Frame	Replace frame	\$1,000
7	Corroded Frame	Replace frame	\$1,000
8	Roots	Remove roots and re-grout	\$1,000
9	Corroded Frame, Roots	Remove roots and re-grout, replace frame	\$1,900
10	Corroded Frame	Replace frame	\$1,000
13	Weeping Frame Seal	Re-grout frame seal	\$600
14	Cracked/Stained Frame Seal	Re-grout frame seal	\$600
15	Stained Frame Seal	Re-grout frame seal	\$600
19	Stained Frame Seal	Re-grout frame seal	\$600
21	Corroded Frame	Replace frame	\$1,000
23	Corroded Frame, Missing Frame Seal	Replace frame, re-grout frame seal	\$1,500
24	Stained/Offset Frame Seal (4"), Roots	Remove roots and re-grout frame seal	\$1,000
25	Debris, Deposits (Fine), Corroded Frame, Missing Frame Seal	Clean manhole, re-grout frame seal, replace frame	\$1,800
26	Cracks, Corroded Frame, Stained Frame Seal	Re-grout wall and frame seal	\$1,500
27	Cracks, Debris, Deposits, Corroded Frame, Cracked/Stained Frame Seal	Clean and re-grout manhole, replace frame, re-grout frame seal	\$2,800
28	Roots	Remove roots and re-grout	\$1,000
31	Offset Frame Seal (3"), Unlevel Frame	Re-grout frame seal	\$600
35	Roots, Corroded Frame	Remove roots and re-grout, replace frame	\$1,800
36	Infiltration, Corroded Frame	Re-grout manhole, replace frame	\$1,800

Manhole Number	Defect	Recommended Action	Estimated Cost
37	Infiltration, Roots	Remove roots and re-grout	\$1,000
38	Infiltration, Roots, Corroded Frame	Remove roots and re-grout, replace frame	\$1,800
39	Infiltration, Corroded Frame	Re-grout manhole, replace frame	\$1,800
40	Roots, Debris, Corroded Frame	Remove roots and re-grout, clean manhole, replace frame	\$2,100
41	Cracks, Corroded Frame	Re-grout manhole, replace frame	\$1,800
42	Corroded Frame, Stained Frame Seal	Replace frame, re-grout frame seal	\$1,500
Sub-Total Opinion of Probable Construction Cost:			\$37,200

Table 4-2: Pump Station Recommendations and Opinion of Probable Construction Cost

Pump Station	Recommended Action	Cost
1	<ul style="list-style-type: none"> Replace with new pump station 	\$208,000
	<ul style="list-style-type: none"> Provide three phase power to station 	\$96,000
	<ul style="list-style-type: none"> Provide water service and the City's standard post hydrant 	\$4,000
	<ul style="list-style-type: none"> Bypass Pumping 	\$45,000
2	<ul style="list-style-type: none"> Provide three phase power to station 	\$90,000
	<ul style="list-style-type: none"> Modify electrical panel to remove "add-a-phase" device Replace control panel supports with non-corrosive materials Relocate all electrical equipment to comply with NFPA 820 Install new conduit with sealing hubs Install a transfer switch and generator receptacle Install junction box for splicing of float switch cables Install conduit for grounding conductors Replace telephone panel with a SCADA panel 	\$75,500
	<ul style="list-style-type: none"> Install 4" wetwell vent 	\$600
	<ul style="list-style-type: none"> Replace flow meter vault 	\$8,000
	<ul style="list-style-type: none"> Grade, stabilize and install rip-rap in eroded areas adjacent to station 	\$7,500
	<ul style="list-style-type: none"> Replace valves and valve vault Add pressure gauges Drain valve vault to pump station 	\$30,000
	<ul style="list-style-type: none"> Provide water service and the City's standard post hydrant 	\$4,000
	<ul style="list-style-type: none"> Install confined space posting on wetwell and valve vault hatches 	\$300
	<ul style="list-style-type: none"> Bypass Pumping 	\$12,500
Sub-Total Opinion of Probable Construction Cost		\$541,400

Table 4-3: Pipe Recommendations and Opinion of Probable Construction Cost

Start Manhole Number	End Manhole Number	Recommended Action	Cost
3	4	Cured-In-Place Pipe	\$30,600
5	4	Point Repairs at 85' & 105'	\$18,200
10	9	Cured-In-Place Pipe	\$36,300
4	PS	Cured-In-Place Pipe	\$25,000
39	37	Cured-In-Place Pipe	\$36,300
41	40	Point Repairs at 137' & 147'	\$16,200
39	40	Cured-In-Place Pipe	\$39,000
34	35	Cured-In-Place Pipe	\$42,000
35	36	Pipe Burst to 8"	\$49,500
36	37	Root Cutting and Joint Grouting	\$14,200
PS	24	Pipe Burst to 8"	\$16,000
24	25	Pipe Burst to 8"	\$31,700
25	27	Pipe Burst to 8"	\$31,700
28	27	Pipe Burst to 8"	\$37,100
27	41	Pipe Burst to 8"	\$26,000
42	32	Pipe Burst to 8"	\$28,200
32	31	Pipe Burst to 8"	\$46,500
31	30	Pipe Burst to 8"	\$28,000
N/A	N/A	Lateral Rehab and Reconnection	\$160,000
Sub-Total Opinion of Probable Construction Cost:			\$720,811

Overall Cost Summary

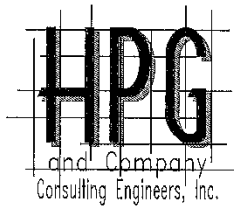
Table 4-4: Total Opinion of Cost

Manhole Rehabilitation Probable Construction Cost	\$37,200
Pump Station Recommendations Probable Construction Cost	\$541,400
Pipeline Rehabilitation Probable Construction Cost	\$720,811
Additional CCTV	\$20,000
Sub-Total Probable Construction Cost:	\$1,319,411
Preliminary Engineering, Pump Station/Force Main Capacity Evaluation and Engineering Design and Construction Services	\$283,500
Legal	\$66,000
Contingency	\$263,900
Total Probable Project Cost:	\$1,932,811

SYNERGY UTILITIES, LP
PRELIMINARY COST ESTIMATE
SANITARY SEWER SYSTEM IMPROVEMENT
FOR
NORTHWOODS ESTATE SUBDIVISION

Date: June 4, 2020
HPG File No. 20022

<i>Item Description</i>	<i>Unit</i>	<i>Quantity</i>	<i>Unit Price</i>	<i>Total Price</i>
1. Cured-in-place pipe				
<u>Start MH</u> <u>End MH</u>				
3 4	LF	225	\$ 65.00	\$ 14,625.00
10 9	LF	260	\$ 65.00	\$ 16,900.00
4 PS	LF	200	\$ 65.00	\$ 13,000.00
39 37	LF	270	\$ 65.00	\$ 17,550.00
39 40	LF	350	\$ 65.00	\$ 22,750.00
34 35	LF	450	\$ 65.00	\$ 29,250.00
2. Point repairs	EA	4	\$ 5,000.00	\$ 20,000.00
3. Service reconnects	EA	18	\$ 100.00	\$ 1,800.00
Manhole rehab				
4. (ring / cover)	EA	36	\$ 1,500.00	\$ 54,000.00
Pump station				
5. (electrical)	LS	1	\$ 10,000.00	\$ 10,000.00



Subtotal Construction	\$ 199,875.00
Contingencies (10%)	\$ 19,987.50
Engineering Services	\$ 19,987.50

TOTAL PROJECT COST \$ 239,850.00